

Appendix C.

Statistical Methodology

MAIL LIST MODEL

Classification analysis was performed to predict the probability that an addressee on the 1992 mail list operated a farm, and thereby separated the preliminary mail list into probable farm and probable nonfarm classes. The analysis was used to reduce the preliminary census mail list of 3.78 million records to a final mail list size of 3.55 million records. All 3.55 million addresses on the final mail list received a census of agriculture report form.

Records from the 1987 final census mail list were used to build a 1992 prediction model for the 1992 analysis. Classification and Regression Trees (CART) software analyzed characteristics of known 1987 farm and nonfarm operations to determine which were most useful in predicting farm and nonfarm classes. Record characteristics such as the source of the mail list record, number of source lists on which the record appeared, expected value of agricultural sales, and geographic location were used to separate mail list records into model groups. (Sources included the previous agriculture census mail list, the Internal Revenue Service administrative records, U.S. Department of Agriculture, and special commodity lists.) The proportion of 1987 census farm records in each model group was calculated to provide an estimate of the probability that an addressee in the group operated a farm.

After the model groups were defined, each address record on the 1992 preliminary mail list was assigned to a model group by matching record characteristics to model group characteristics. Records belonging to the groups with the highest farm probability were those more likely to be farms according to the classification tree methodology. The model, followed by analyst reviews, was used to remove 229,700 records from the preliminary mail list (those in model groups with the lowest farm probability), and thereby designated the 3.55 million records with the highest farm probability to receive the census report form. This procedure was used to obtain a more complete census enumeration of farm operations without excessive respondent burden and data collection cost.

CENSUS SAMPLE DESIGN

Each of the 3.55 million name and address records on the census mail list was designated to receive one of three different types of census report forms. The three forms were the nonsample form, the screener form, and the

sample form. Sections 1 through 20 and 27 through 32 of the sample form are identical to sections on the non-sample form. The sample form, sections 21 through 26, contains additional questions on usage of fertilizers and chemicals, farm production expenditures, value of machinery and equipment, value of land and buildings, and farm-related income. The screener form is identical to the nonsample form with questions added in section 1 to allow quick identification of nonfarm addresses. These three different forms were used to reduce the response burden of the census, while providing reliable information on a large number of data items.

The sample form was mailed to all mail list records in Alaska, Hawaii, and Rhode Island, and to a sample of records in other States selected from the final mail list. Addresses were selected into the sample with certainty (1) if they were expected to have large total value of agricultural products sold or large acreage, (2) if they were multiunit operations (i.e., separate farms in more than one location), (3) if they had other special characteristics, or (4) if they were in a county with less than 100 farms in 1987. Other addresses in counties containing 100 to 199 farms in 1987 were systematically sampled at a rate of 1 in 2, and other addresses in counties containing 200 farms or more in 1987 were systematically sampled at a rate of 1 in 6. This differential sampling scheme was used to provide reliable data for the sample sections of the report form for all counties. When a nonsample large farm was identified during processing, a supplemental form that contained the additional sample data inquiries was mailed.

To determine which mail list records would receive the screener form, all mail list records not designated for the sample were sorted by model group farm probability as specified by the mail list model. The 412,000 mail list records in the model groups with the lowest probability of being farms and with an expected total value of agricultural product sales less than \$25,000 were designated to receive the screener report form. The remaining mail list records received the nonsample report form.

CENSUS ESTIMATION

The 1992 Census of Agriculture used two types of statistical estimation procedures. These estimation procedures accounted for nonresponse to the data collection and for the sample data collection. These procedures are necessary because some farm operators never respond to

the census despite numerous attempts to contact them, and the estimates for the sample data are based on a sample of farm operators rather than a full enumeration.

Whole Farm Nonresponse Estimation

A statistical estimation procedure was used to account for nonrespondent farm operators to the census. We excluded large and unique farm operations that received intensive telephone followup during census processing, assuming complete response from them. A stratified systematic sample of remaining census nonrespondents were contacted by enumerators using a computer-assisted telephone interview system. Five sample strata were defined based on expected value of sales, previous census status, and whether the record was identified by the mail list model to receive the screener report form. The nonresponse survey telephone interview was designed to provide sufficient information to determine the farm status of each record.

In situations where the nonresponse survey case could not be contacted, the contact person refused to cooperate, or when no phone number could be obtained, a screener report form was sent by certified mail.

Estimates of the proportion of census nonrespondents that operated farms were made for each stratum in the State using survey results and applied to the total number of census nonrespondents in that stratum. The number of census nonrespondents that operated farms for each county by stratum was then derived. This estimation procedure is based on the assumption that the distribution of farms in a stratum by county is the same for census nonrespondents as for census respondents.

Certain census respondent farms which exhibited "rare" commodities were designated as "ineligible" to represent census nonrespondent farms and were excluded from the nonresponse weighting operation. The procedure explained below was performed with only the eligible respondent cases: Within each stratum in a county, a noninteger nonresponse weight was calculated and assigned to each eligible respondent farm record. The noninteger nonresponse weight is the ratio of the sum of the estimated number of nonrespondent farms from the nonresponse survey and the number of eligible census respondent farms to the number of eligible census respondent farms. Stratum controls were established to ensure that this weight was never greater than 2.0. The noninteger nonresponse weight was used in the calculation of the final weight for the sample items. The noninteger nonresponse weight was randomly rounded to an integer weight of either 1 or 2 for each record for tabulating the complete count items for publication.

Table A quantifies the effect of the nonresponse estimation procedure on selected census data items. The percentages in these tables are the percents of the census values contributed by nonresponse estimation. These indicate the potential for bias in published figures resulting from nonresponse to the census. The estimates provided

in these tables do not reflect the effect of item nonresponse to individual census data items. The effect of item nonresponse is discussed in the Census Nonsampling Error section.

Table A. Percent of State Totals Contributed by Whole Farm Nonresponse Estimation: 1992

Item	Percent of total
Farms	17.1
Land in farms.....acres	9.8
Estimated market value of land and buildings ¹\$1,000	4.0
Market value of agricultural products sold ..\$1,000	7.0
Harvested croplandacres	8.2
Corn for grain or seedacres	4.7
Wheat for grainacres	8.2
Livestock and poultry inventory:	
Cattle and calvesnumber	11.8
Hogs and pigsnumber	9.3
Hens and pullets of laying agenumber	2.5

¹Data are based on a sample of farms.

Sample Estimation

Sample data estimates the population totals that would have resulted from a complete census for the items in sections 21 through 26 of the sample report form. The estimates were obtained from a ratio estimation procedure that resulted in the assignment of a weight to each respondent record containing sample items. For any given county, a sample item total was estimated by multiplying the data items for each farm in the county by the corresponding sample weight and summing over all sample records in the county.

Each respondent sample farm was assigned a sample weight for use in producing estimates for all sample items. For example, if the weight given to a sample farm had the value 6, all sample data items reported by that farm would be multiplied by 6. The weight assigned to a sample certainty farm was 1.

Other than certainty farms, within a county, the ratio estimation procedure for farms was performed in three steps using three variables. The first variable contained eight 1992 total value of agricultural production (TVP) groups. Both the second and third variables, Standard Industrial Classification (SIC) code and farm acreage, contained two groups. The three sets of groups were as follows:

TVP	SIC	Acres
\$1 to \$999	01 All crops	1 to 69
\$1,000 to \$2,499	02 All livestock	70 or more
\$2,500 to \$4,999		
\$5,000 to \$9,999		
\$10,000 to \$24,999		
\$25,000 to \$49,999		
\$50,000 to \$99,999		
\$100,000 or more		

The first step in the estimation procedure was to classify the sample records into 32 mutually exclusive initial post strata formed by the three sets of groups. The total and sample farm counts were expanded to account for nonresponse. Each cell containing sample farm records was assigned an initial sample weight equal to the ratio of the total farm count to the sample farm count. This weight was approximately equal to the inverse of the probability of selecting a farm for the census sample.

The second step in the estimation procedure was to combine, if necessary, the 32 initial post strata to increase the reliability of the ratio estimation procedure. Any stratum that contained less than 10 sample farms after nonresponse adjustment or had a weight greater than two times the mail sample rate was collapsed with another stratum. The mail sample rate was either 2 or 6, depending on whether the county had a 1 in 2 or 1 in 6 sample selection rate. The collapsing occurred within the initial 32 post strata according to a specified collapsing pattern. After the collapsing process was completed, new total farm counts and sample farm counts were computed from each of the final post strata and were used to calculate final sample weights.

The final step consisted of assigning the noninteger final post stratum weight to the sample farm records in each post stratum. The weight is the ratio of total farm count to sample farm count in each final post stratum. The noninteger sample weight, the product of the noninteger final post stratum weight and the nonresponse weight, was randomly rounded to an integer weight for tabulation. If, for example, the final weight for the farms in a particular post stratum was 7.2, then 0.2 or one-fifth of the sample farms in this post stratum were randomly assigned a weight of 8 and the remaining four-fifths received a weight of 7.

CENSUS SAMPLING ERROR

The sample for the 1992 Census of Agriculture is only one of a large number of possible samples of the same size that could have been selected using the same sample design. Sample refers to the sample for both the nonresponse survey and the selection of farms to receive the sample report forms. Estimates derived from all the possible samples would differ from each other only by random variation.

The standard error or sampling error of a survey estimate is a measure of the variation among the estimates from all possible samples and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The percent relative standard error of an estimate is defined as 100 times the standard error of the estimate divided by the value of the estimate.

If all possible samples were selected, each of the samples were surveyed under essentially the same conditions, and an estimate and its standard error were calculated from each sample, then:

1. Approximately 90 percent of the intervals from 1.65 standard errors below the estimate to 1.65 standard errors above the estimate would include the average value of all possible samples.
2. Approximately 95 percent of the intervals from 1.96 standard errors below the estimate to 1.96 standard errors above the estimate would include the average value of all possible samples.

The following example illustrates the computations necessary for producing a confidence interval for an estimate. Assume that the estimate of number of farms for a State is 94,382 and the relative standard error of the estimate is .1 percent (0.001). Multiplying 94,382 by 0.001 yields 94, the standard error; therefore, a 90-percent confidence interval is 94,227 to 94,537 (i.e., 94,382 plus or minus 1.65 x 94). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 90 percent of these intervals would contain the figure obtained from a complete enumeration. Similarly, a 95-percent confidence interval is 94,198 to 94,566 (i.e., 94,382 plus or minus 1.96 x 94).

Census items were classified as either complete count or sample count items. Complete count items were asked of all farm operators. Examples of complete count items were land in farms, harvested cropland, livestock inventory and sales, crop acreage, quantities harvested and crop sales, land use, irrigation, government loans and payments, conservation acreage, type of organization, and operator characteristics.

Sample count items were asked only of a sample of farm operators. These items appeared only in sections 21 through 26 of the sample report form. Sample count items were included under the following section headings: commercial fertilizers, chemicals, production expenses, farm machinery and equipment, value of land and buildings, and farm-related income.

Variability, measured as percent relative standard error, in the estimates of complete count items is due only to the nonresponse survey estimation procedure. Variability in the estimates of sample count items is due to both the nonresponse survey estimation procedure and the census sample selection and estimation procedure. Thus, variability in the sample count item estimates tends to be larger than the variability in the complete count item estimates.

Table B provides the generalized reliability estimates of the estimated number of farms in a county reporting complete count and sample count items. The top half of the table shows the percent relative standard error for estimated number of farms in a county reporting a complete count item and the bottom half a sample count item. These are derived from regression equations. Separate regression equations were used for complete count items and sample count items. Each regression equation was fit with the estimated number of farms in a county reporting an item as the independent variable and the relative variance of that estimate as the dependent variable for all counties in the State. For sample count items, only data

from counties sampled at a rate of 1 in 6 are used in the estimation of the regression equation.

Table B. Reliability Estimates for Number of Farms in a County Reporting a Complete Count Item or Sample Count Item: 1992

Farms	Relative standard error of estimate (percent)
COMPLETE COUNT ITEM	
Number of farms reporting:	
25	6.6
50	4.7
75	3.9
100	3.4
150	2.9
200	2.5
300	2.2
500	1.8
750	1.6
1,000	1.5
1,500	1.4
2,000	(NA)
SAMPLE COUNT ITEM	
Number of farms reporting:	
25	22.5
50	17.6
75	15.6
100	14.5
150	13.4
200	12.7
300	12.1
500	11.5
750	11.3
1,000	11.1
1,500	11.0
2,000	(NA)

To illustrate the use of this table, assume that the estimate of the number of farms reporting hogs and pigs for a particular county, as given in county table 15, is 89. Since hogs and pigs is a complete count data item, refer to the first part of table B and use the estimated percent relative standard error of the estimate from the row with farm count equal to or just less than the estimated number of farms, 89. For this example, the percent relative standard error of the estimate comes from the row for 75 farms reporting. For sample count items, follow the same procedure using the second part of table B. For counties with fewer than 100 farms in the 1987 Census of Agriculture, variability in sample count item estimates comes only from nonresponse survey estimation procedures; thus, the estimated relative standard error for a sample count item in these counties may be obtained using the first part of table B.

Table C presents the percent relative standard error of selected State data items for all farms, and table D presents the percent relative standard error of selected State data items for all farms with sales of \$10,000 or more.

Table E presents the percent standard error for percent change in State totals from 1987 to 1992. The general

purpose of the percent change estimate is to provide a relative measure of the difference in a characteristic between censuses. The relative change for a given characteristic is defined as the ratio of the difference of the 1992 and the 1987 estimate for that characteristic to the 1987 estimate. This ratio is multiplied by 100 to obtain the percent change. The percent standard error of a percent change estimate, then, is the standard error of the ratio multiplied by 100.

Table F presents the percent relative standard error for State and county totals for selected data items. The percent relative standard error of the estimate for the same item differs among counties in the State. Reasons for this are differences among counties in (1) the total number of farms, (2) the number of large farms included with certainty, (3) the size classifications of the farms sampled, (4) the amount of nonresponse, (5) the general agricultural characteristics, and (6) the specific characteristic being measured.

CENSUS NONSAMPLING ERROR

The accuracy of the census counts are affected jointly by sampling errors, described in the previous section, and nonsampling errors. Extensive efforts were made to compile a complete and accurate mail list for the census, to design an understandable report form with instructions, and to minimize processing errors through the use of quality control measures on specific operations. Nonsampling errors arise from incompleteness of the census mail list, duplication in the mail list, incorrect data reporting, errors in editing of reported data, and errors in imputation for missing data. These specific nonsampling errors are further discussed in this section. Evaluation studies will be conducted to measure the extent of certain nonsampling errors such as coverage error and classification error.

Census Coverage

The main objective of the census of agriculture is to obtain a complete and accurate enumeration of U.S. farms with accurate data on all aspects of the agricultural operation. However, the high cost and availability of resources for enumeration place restrictions on feasible data collection methodologies. The past six agriculture censuses have been conducted by mail enumeration with telephone contact for selected nonrespondents. The completeness of such an enumeration thus depends to a large extent on the coverage of farm operations by the census mail list.

The past five censuses of agriculture have included approximately 91 percent of farms in the United States and approximately 96 percent of agriculture production. Complete enumeration of agricultural operations satisfying the farm definition of \$1,000 or more in agricultural sales is complicated by fluctuations in agricultural operations qualifying for enumeration, the variety of arrangements under which farms are operated, the multiplicity of names used

by an operation, the number of operations in which an operator participates, the accuracy of data reporting, and other factors. A new mail list is compiled for each census because no current single list of agricultural operations is comprehensive.

An evaluation of census coverage has been conducted for each census of agriculture since 1945. The evaluation provides estimates of the completeness of census farm count and major census data items. In addition, the evaluation helps to identify problems in the census enumeration and provide information that can form the basis for improvements. The results of the 1992 Coverage Evaluation program will be published in volume 2, Subject Series (Part 2): Coverage Evaluation.

The evaluation of coverage for the 1992 census was designed to measure four components of error in the census mail list and in farm classification. Mail list error includes two components of error, a measurement of farms not on the census mail list (undercount) and a measurement of farms enumerated more than once in the census (overcount). Classification error includes two components of error, a measurement of farms classified as nonfarms in the census (undercount) and of nonfarms classified as farms in the census (overcount). Classification error arises from reporting and processing errors. Mail list undercount dominates all coverage errors. Net coverage error is defined as the difference between undercounted and overcounted farms. Measurements of these errors, as well as a description of the complete coverage program, will be available in the Coverage Evaluation report.

Mail List Coverage

A major problem with mail enumeration for the census of agriculture is the difficulty encountered in compiling a complete mail list. The percentage of farms included on the census mail list varies considerably by State. Several reasons have contributed to farm operator names not being included on the census mail list—the operation may have been started after the mail list was developed, the operation may be so small as not to appear in any of the agriculture-related source lists used in compiling the census list, or the operation may have been falsely classified as a nonfarm prior to mailout. A large proportion of the farms not included on the mail list are small in both acres and sales of agricultural products.

The 1992 Census of Agriculture Coverage Evaluation used the area segment sample of the 1992 June Agricultural Survey (JAS) of the National Agricultural Statistical Service (NASS) to estimate farms not on the census mail list. The Census Bureau contracted with NASS to augment the JAS data collection. The survey data collected by NASS will be protected under the confidentiality of title 13, U.S. Code. These JAS survey records were matched to the census mail list. Records that did not match were mailed a census of agriculture report form to estimate mail list

coverage. Estimates of farms not on the census mail list are computed using a capture-recapture dual frame estimator which will be described in the Coverage Evaluation report mentioned earlier.

Table G provides coverage evaluation estimates for one component of coverage error associated with the census of agriculture; that is, the error due to farms not on the census mail list. Also provided are estimates of selected characteristics of farms not on the mail list, estimates of characteristics of farms not on the mail list as a percentage of total farms in the State, and the percent relative standard error associated with each estimate. The estimate of total farms in the State is based on census farm count plus the estimated number of farms not on the census mail list. This estimate of total farms in the State was not adjusted for the components of error associated with classification and list duplication error. Estimates of these errors will be made at the regional, rather than the State level, and will be provided in the Coverage Evaluation report mentioned earlier.

Respondent and Enumerator Error

Incorrect or incomplete responses to the mailed census report form or to the questions posed by a telephone enumerator introduce error into the census data. Such incorrect information can lead, in some cases, to incorrect classification of farms. This type of reporting error is measured by the Classification Error Survey discussed later in this section. To reduce all types of reporting error, detailed instructions for completing the report form were provided to each addressee. Questions were phrased as clearly as possible based on tests of the census report form and each respondent's answers were checked for completeness and consistency.

Item Nonresponse

As information flows from data collection to tabulation, various types of item nonresponses are identified on the report forms. Nonresponse to particular questions on the report form that logically should be present may create a type of nonsampling error in both complete count and sample count data. When information from reporting farms is used to edit or impute for item nonresponse, the data may be biased due to characteristics of the nonreporting respondents differing from those reporting the item. Any attempt to correct the data items may not completely reflect this difference either at the element level (individual farm operation) or on the average.

Processing Error

All phases of processing for each report form are sources for the introduction of nonsampling error. The processing of the report forms includes clerical screening for farm activity, computerized check-in of report forms and follow-up of nonrespondents, keying and transmittal of

completed report forms, computerized editing of inconsistent and missing data, review and correction of individual records referred from the computer edit, review and correction of tabulated data, and electronic data processing. These operations undergo a number of quality control checks to ensure as accurate an application as possible, yet some errors are not detected and corrected.

Classification Error

An evaluation study of classification errors was conducted in the 1992 Census of Agriculture as part of the census coverage evaluation program. A sample of census mail list respondents was selected, and these addresses were reenumerated to determine whether they were a farm or nonfarm. A farm status determination was made based on the evaluation report form and compared with the census farm status which was based on the data reported on the report form. Differences in status were reconciled.

In past censuses, the proportion of farms undercounted due to classification errors was higher for farms with small values of sales. For the 1987 census, the classification error rate was higher for (1) farms with small values of sales, (2) farms with a small number of acres, (3) full-owner farms than part-owner or tenant farms, (4) operators with principal occupation other than farming, and (5) males than females. Results from the 1992 Classification Error Survey will be published in the Coverage Evaluation report.

EDITING DATA AND IMPUTATION FOR ITEM NONRESPONSE

The Census of Agriculture Complex Edit and Imputation System performs the following functions:

- Ensuring reasonable relationships between/among data items, values for various sizes of farms, and combinations of commodities.
- Ensuring necessary consistencies are present. There are more than 70 distinct consistency requirements.
- Ensuring geographic, legal, and physical constraints are met.

The system must perform these and similar functions for 900 data keycodes for sample records and 850 data keycodes for nonsample records.

For the 1992 Census of Agriculture, as in previous censuses, all reported data were keyed and then edited by computer. The edits were used to determine whether the reports met the minimum criteria to be counted as farms in the census. The complex edit and imputation system provided the basis for deciding to accept, impute (supply), delete, or alter the reported value for each data record item.

Whenever possible, edit imputations, deletions, and changes were based on component or related data on the respondent's report form. For some items, such as operator characteristics, data from the previous census were used when available. Values for other missing or unacceptable reported data items were calculated based on reported quantities and known price parameters.

When these and similar methods were not available and values had to be supplied, the imputation process used information reported for another farm operation in a geographically adjacent area with characteristics similar to those of the farm operation with incomplete data. For example, a farm operation that reported acres of corn harvested, but did not report quantity of corn harvested, was assigned the same bushels of corn per acre harvested as that of the last nearby farm with similar characteristics that reported acceptable yields during that particular execution of the computer edit. The imputation for missing items in each section of the report form was conducted separately; thus, assigned values for one operation could come from more than one respondent.

Prior to the imputation operation, a set of default values and relationships were assigned to the possible imputation variables. The relationships and values varied depending on the item being imputed. For example, different default values were assigned for several standard industrial classification and total value of sales categories when imputing hired farm labor expenses. These values and item relationships for the possible imputation variables were stored in the computer in a series of matrices.

Each execution of the computer edit consisted of records from only one State. The computer records were sorted by reported State and county. For a given execution of the edit, the stored entries in the various matrices were retained in memory only until a succeeding record having acceptable characteristics for some sections of the report form was processed by the computer. Then the acceptable responses of the succeeding operation replaced those previously stored. When a record processed through the edit had unreported or unacceptable data, the record was assigned the last acceptable ratio or response from an operation with a similar set of characteristics. Once each execution of the computer edit for a State was completed, the possible imputation variables were reset to the default values and relationships for subsequent executions.

After the initial computer edit, keyed reports not meeting the census farm definition were reviewed to ensure that the data were keyed correctly. Edit referrals were generated for about 25 percent of the reports included as farms; they were reviewed for keying accuracy to ensure that the computer edit actions were correct. If the results of the computer edit were not acceptable, corrections were made and the record was reedited.

Table C. Reliability Estimates of State Totals for All Farms: 1992

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
F FARMS AND LAND IN FARMS					
Farms ----- number	31 123	1.7	F FARM PRODUCTION EXPENSES¹		
Land in farms ----- acres	39 438 144	1.1	Total farm production expenses ----- farms	31 124	1.7
Average size of farm ----- acres	1 267	2.0	Average per farm ----- dollars	2 090 938	.9
M MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD					
Total sales (see text) ----- farms	31 123	1.7	Livestock and poultry purchased ----- farms	9 615	2.5
\$1,000-----	2 745 752	.8	\$1,000----- \$1,000	143 982	2.5
Average per farm ----- dollars	88 223	1.9	Feed for livestock and poultry ----- farms	14 372	2.2
Farms by value of sales:			\$1,000----- \$1,000	104 335	2.1
Less than \$1,000 (see text) ----- farms	1 269	2.1	Commercially mixed formula feeds ----- farms	5 065	3.0
\$1,000-----	268	2.5	\$1,000----- \$1,000	30 787	3.3
\$1,000 to \$2,499 ----- farms	870	2.1	Seeds, bulbs, plants, and trees ----- farms	21 636	1.8
\$1,000-----	1 495	2.2	\$1,000----- \$1,000	117 860	.9
\$2,500 to \$4,999 ----- farms	1 363	2.1	Commercial fertilizer ----- farms	19 856	1.7
\$1,000-----	4 994	2.1	\$1,000----- \$1,000	200 797	.7
\$5,000 to \$9,999 ----- farms	2 191	2.2	Agricultural chemicals ----- farms	21 373	1.8
\$1,000-----	16 068	2.3	\$1,000----- \$1,000	161 765	.9
\$10,000 to \$19,999 ----- farms	3 474	2.6	Petroleum products ----- farms	30 299	1.8
\$1,000-----	50 854	2.6	\$1,000----- \$1,000	181 040	1.1
\$20,000 to \$24,999 ----- farms	1 377	2.9	Electricity ----- farms	25 489	1.8
\$1,000-----	30 641	2.9	\$1,000----- \$1,000	33 698	1.3
\$25,000 to \$39,999 ----- farms	3 521	2.7	Hired farm labor ----- farms	11 895	1.9
\$1,000-----	112 475	2.7	\$1,000----- \$1,000	99 790	.7
\$40,000 to \$49,999 ----- farms	1 878	2.7	Contract labor ----- farms	2 800	3.7
\$1,000-----	83 802	2.7	\$1,000----- \$1,000	9 370	2.6
\$50,000 to \$99,999 ----- farms	6 502	2.1	Repair and maintenance ----- farms	28 340	1.8
\$1,000-----	467 032	2.0	\$1,000----- \$1,000	191 111	1.2
\$100,000 to \$249,999 ----- farms	6 525	.6	Customwork, machine hire, and rental of machinery and equipment ----- farms	15 304	2.0
\$1,000-----	1 004 031	.5	\$1,000----- \$1,000	64 170	1.5
\$250,000 to \$499,999 ----- farms	1 640	—	Interest expense ----- farms	20 696	1.8
\$1,000-----	549 501	—	\$1,000----- \$1,000	213 388	1.2
\$500,000 or more ----- farms	513	—	Secured by real estate ----- farms	13 703	2.0
\$1,000-----	424 592	—	\$1,000----- \$1,000	123 687	1.4
Sales by commodity or commodity group:			Not secured by real estate ----- farms	14 458	2.0
Crops, including nursery and greenhouse crops ----- farms	25 312	1.7	\$1,000----- \$1,000	89 700	1.3
\$1,000-----	2 030 900	.7	Cash rent ----- farms	16 577	1.8
Grains ----- farms	23 947	1.7	\$1,000----- \$1,000	277 212	1.0
\$1,000-----	1 756 303	.7	Property taxes ----- farms	26 816	1.8
Corn for grain ----- farms	2 494	1.1	\$1,000----- \$1,000	56 779	1.7
\$1,000-----	61 219	.5	All other farm production expenses ----- farms	30 160	1.8
Wheat ----- farms	22 908	1.7	\$1,000----- \$1,000	235 642	1.1
\$1,000-----	1 145 980	.8	NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)¹		
Soybeans ----- farms	2 841	1.0			
\$1,000-----	80 260	.5	All farms ----- number	31 124	1.7
Sorghum for grain ----- farms	14	5.9	\$1,000----- \$1,000	652 308	1.2
\$1,000-----	88	8.9	Average per farm ----- dollars	20 958	2.1
Barley ----- farms	12 491	1.4	F FARMS WITH NET GAINS²		
\$1,000-----	222 330	.6	Farms with net gains ----- number	21 933	1.8
Oats ----- farms	4 300	2.1	\$1,000----- \$1,000	746 126	1.1
\$1,000-----	20 481	1.6	Average net gain ----- dollars	34 018	2.1
Other grains ----- farms	8 896	1.2	F FARMS WITH NET LOSSES		
\$1,000-----	225 943	.5	Farms with net losses ----- number	9 191	2.7
Cotton and cottonseed ----- farms	—	—	\$1,000----- \$1,000	93 819	2.8
\$1,000-----	—	—	Average net loss ----- dollars	10 208	3.8
Tobacco ----- farms	—	—	G GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME		
\$1,000-----	—	—			
Hay, silage, and field seeds ----- farms	5 192	1.9	Government payments ----- farms	23 697	1.7
\$1,000-----	31 691	1.6	\$1,000----- \$1,000	304 271	1.1
Vegetables, sweet corn, and melons ----- farms	131	3.4	Other farm-related income ¹ ----- farms	12 959	2.2
\$1,000-----	1 022	4.6	\$1,000----- \$1,000	64 555	3.3
Fruits, nuts, and berries ----- farms	32	6.3	Customwork and other agricultural services ----- farms	3 619	3.3
\$1,000-----	106	2.8	\$1,000----- \$1,000	23 173	4.0
Nursery and greenhouse crops ----- farms	117	3.3	Gross cash rent or share payments ----- farms	4 377	3.6
\$1,000-----	6 772	2.6	\$1,000----- \$1,000	33 103	5.3
Other crops ----- farms	1 328	1.0	Forest products and Christmas trees ----- farms	101	20.8
\$1,000-----	235 007	.3	\$1,000----- \$1,000	318	19.2
Livestock, poultry, and their products ----- farms	17 222	1.8	Other farm-related income sources ----- farms	8 814	2.5
\$1,000-----	714 852	1.2	\$1,000----- \$1,000	7 961	4.6
Poultry and poultry products ----- farms	478	2.3	C COMMODITY CREDIT CORPORATION LOANS		
\$1,000-----	14 570	.7			
Dairy products ----- farms	1 647	2.0	Total ----- farms	5 764	1.4
\$1,000-----	104 589	1.4	\$1,000----- \$1,000	144 439	.6
Cattle and calves ----- farms	15 249	1.9			
\$1,000-----	516 914	1.2			
Hogs and pigs ----- farms	2 033	1.8			
\$1,000-----	52 133	1.1			
Sheep, lambs, and wool ----- farms	1 710	1.9			
\$1,000-----	11 776	1.7			
Other livestock and livestock products (see text) ----- farms	1 149	1.9			
\$1,000-----	14 871	1.8			
Value of agricultural products sold directly to individuals for human consumption (see text) ----- farms	500	2.1			
\$1,000-----	890	2.2			

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-7

Table C. Reliability Estimates of State Totals for All Farms: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)		
LAND IN FARMS ACCORDING TO USE							
Total cropland	farms--	28 967	All operators	farms--	31 123		
	acres--	27 469 875		acres--	39 438 144		
Harvested cropland	farms--	27 804	Full owners	farms--	9 898		
	acres--	19 216 531		acres--	7 130 011		
Farms by acres harvested:			Part owners	farms--	16 058		
1 to 9 acres	farms--	335		acres--	27 481 619		
	acres--	1 507	Tenants	farms--	5 167		
10 to 19 acres	farms--	460		acres--	4 826 514		
	acres--	6 008					
20 to 29 acres	farms--	392	TENURE OF OPERATOR				
	acres--	8 864	All operators	farms--	31 123		
30 to 49 acres	farms--	803		acres--	39 438 144		
	acres--	30 061	Full owners	farms--	9 898		
50 to 99 acres	farms--	1 674		acres--	7 130 011		
	acres--	121 179	Part owners	farms--	16 058		
100 to 199 acres	farms--	3 244		acres--	27 481 619		
	acres--	465 523	Tenants	farms--	5 167		
200 to 499 acres	farms--	7 304		acres--	4 826 514		
	acres--	2 442 104	OWNED AND RENTED LAND				
500 to 999 acres	farms--	7 202	Land owned	farms--	26 340		
	acres--	5 163 337		acres--	22 178 843		
1,000 acres or more	farms--	6 390	Owned land in farms	farms--	25 956		
	acres--	10 977 948		acres--	19 856 683		
Cropland:			Land rented or leased from others	farms--	21 357		
Pasture or grazing only	farms--	7 644		acres--	19 833 878		
	acres--	1 714 882	Rented or leased land in farms	landlords--	60 577		
Other cropland	farms--	23 343		farms--	21 225		
	acres--	6 538 462		acres--	19 581 461		
Total woodland	farms--	3 305	Land rented or leased to others	farms--	5 636		
	acres--	342 485		acres--	2 574 577		
Pastureland and rangeland other than cropland and woodland pastured	farms--	14 565	OPERATOR CHARACTERISTICS				
	acres--	10 284 485	Operators by place of residence:				
Land in house lots, ponds, roads, wasteland, etc.	farms--	18 693	On farm operated		21 830		
	acres--	1 341 299	Not on farm operated		6 812		
Irrigated land	farms--	816	Not reported		2 481		
	acres--	187 212					
Acres irrigated:			Operators by principal occupation:				
1 to 9 acres	farms--	99	Farming		25 189		
	acres--	264	Other		5 934		
10 to 49 acres	farms--	115					
	acres--	3 061	Operators by days worked off farm:				
50 to 99 acres	farms--	108	Any		11 827		
	acres--	7 526	200 days or more		4 916		
100 to 199 acres	farms--	202					
	acres--	28 026	Operators by sex:				
200 to 499 acres	farms--	195	Male	farms--	30 184		
	acres--	60 928		acres--	38 541 351		
500 to 999 acres	farms--	73	Female	farms--	939		
	acres--	50 437		acres--	896 793		
1,000 acres or more	farms--	24	Average age of operator	years--	50.0		
	acres--	36 970			2.4		
Harvested cropland irrigated	farms--	797	FARMS BY TYPE OF ORGANIZATION				
	acres--	181 878	Individual or family (sole proprietorship)	farms--	27 093		
Pasture and other land irrigated	farms--	58		acres--	31 657 333		
	acres--	5 334	Partnership	farms--	3 504		
				acres--	5 621 486		
Land under federal acreage reduction programs:			Corporation:				
Diverted under annual commodity programs	farms--	13 702	Family held	farms--	325		
	acres--	545 854		acres--	647 738		
Conservation Reserve or Wetlands Reserve Programs	farms--	8 615	More than 10 stockholders	farms--	2		
	acres--	2 120 670	10 or less stockholders	farms--	323		
VALUE OF LAND AND BUILDINGS¹							
Estimated market value of land and buildings	farms--	31 124	Other than family held	farms--	24		
\$1,000--		1.7		acres--	26 387		
Average per farm	dollars--	13 163 449	More than 10 stockholders	farms--	2		
Average per acre	dollars--	422 936	10 or less stockholders	farms--	22		
		335					
		1.7	Other—cooperative, estate or trust, institutional, etc.	farms--	177		
		1.2		acres--	1 485 200		
		2.1			3.0		
		1.7			.3		
VALUE OF MACHINERY AND EQUIPMENT¹							
Estimated market value of all machinery and equipment	farms--	31 106	Hired Farm Labor				
\$1,000--		1.7	Hired workers by days worked:				
Average per farm	dollars--	2 715 228	150 days or more	farms--	4 472		
Average per acre	dollars--	87 290		workers--	7 115		
		2.2	Less than 150 days	farms--	10 633		
		1.7		workers--	29 860		
		1.3			2.0		
		2.2					
		1.7					
AGRICULTURAL CHEMICALS¹							
Commercial fertilizer	farms--	19 817	INJURIES AND DEATHS				
acres on which used		13 942 386	Farm-related injuries:				
		.9	Operator and family members	farms--	434		
				number--	488		
			Hired workers	farms--	142		
				number--	170		
					1.5		
					.3		
			Farm-related deaths:				
			Operator and family members	farms--	4		
				number--	4		
			Hired workers	farms--	1		
				number--	(D)		
					14.7		
					.14.7		
					(D)		

See footnotes at end of table.

C-8 APPENDIX C

1992 CENSUS OF AGRICULTURE

Table C. Reliability Estimates of State Totals for All Farms: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
F FARMS BY SIZE					
1 to 9 acres	farms ..	785	Cattle and calves inventory	farms ..	15 183
	acres..	1 882	number ..	1 723 920	1.9
10 to 49 acres	farms ..	1 264	farms ..	13 216	1.4
	acres..	33 625	number ..	837 716	1.9
50 to 69 acres	farms ..	378	farms ..	1 925	1.5
	acres..	21 784	number ..	74 885	2.0
70 to 99 acres	farms ..	560	Cattle and calves sold	farms ..	15 249
	acres..	46 109	number ..	978 947	1.9
100 to 139 acres	farms ..	583	\$1,000 ..	516 914	1.3
	acres..	67 754	farms ..	1 932	1.2
140 to 179 acres	farms ..	1 424	Hogs and pigs inventory	farms ..	346 082
	acres..	225 746	number ..	2 033	1.2
180 to 219 acres	farms ..	527	Hogs and pigs sold	farms ..	603 910
	acres..	104 320	number ..	52 133	1.8
220 to 259 acres	farms ..	547	\$1,000 ..	1 623	1.1
	acres..	130 244	farms ..	217 240	1.9
260 to 499 acres	farms ..	3 911	number ..	1 702	1.7
	acres..	1 482 037	farms ..	192 953	1.8
500 to 999 acres	farms ..	6 714	Sheep and lambs of all ages inventory	farms ..	4 074
	acres..	5 003 057	number ..	24 914	1.8
		2.5	Horses and ponies inventory	farms ..	779
		2.3	number ..	4 842	1.9
		2.6	Horses and ponies sold	farms ..	4 842
		2.6	number ..	4 842	2.3
		2.6	P Poultry		
		2.5	Chickens 3 months old or older inventory	farms ..	838
		2.5	number ..	278 090	2.4
		2.5	Hens and pullets of laying age	farms ..	828
		2.5	number ..	246 952	.5
		2.5	Broilers and other meat-type chickens sold	farms ..	160
		2.5	number ..	38 573	3.1
		1.7	C Crops Harvested		
1,000 to 1,999 acres	farms ..	8 740	Corn for grain or seed	farms ..	3 353
	acres..	12 417 081	acres ..	595 347	1.0
2,000 acres or more	farms ..	5 690	bushels ..	37 487 419	.6
	acres..	19 904 505	farms ..	3 443	.6
F FARMS BY STANDARD INDUSTRIAL CLASSIFICATION					
Cash grains (011)	farms ..	17 731	Wheat for grain	farms ..	278 181
	acres..	23 465 107	acres ..	1 714 645	1.6
Field crops, except cash grains (013)	farms ..	1 593	bushels ..	22 918	1.1
	acres..	2 060 308	farms ..	10 627 608	1.1
Vegetables and melons (016)	farms ..	46	acres ..	409 882 271	.9
	acres..	4 500	bushels ..	13 979	.8
Fruits and tree nuts (017)	farms ..	8	farms ..	2 388 696	1.4
	acres..	316	acres ..	142 747 145	.7
Horticultural specialties (018)	farms ..	87	bushels ..	7 843	.6
	acres..	2 493	farms ..	557 388	2.0
General farms, primarily crop (019)	farms ..	440	acres ..	33 414 633	1.6
	acres..	415 939	bushels ..	5 287	1.5
Livestock, except dairy, poultry, and animal specialties (021)	farms ..	8 896	farms ..	1 130 593	.6
	acres..	11 059 413	pounds ..	1 260 442 267	.6
Dairy farms (024)	farms ..	1 022	farms ..	2 849	1.0
	acres..	1 015 610	acres ..	632 308	.5
Poultry and eggs (025)	farms ..	72	bushels ..	16 116 007	.5
	acres..	19 126	farms ..	1 939	.9
Animal specialties (027)	farms ..	512	acres ..	410 578	.4
	acres..	94 288	cwt ..	5 278 675	.4
General farms, primarily livestock and animal specialties (029)	farms ..	716	Irish potatoes	farms ..	453
	acres..	1 301 044	acres ..	139 511	1.2
		1.0	cwt ..	25 932 800	.3
		2.0	Sugar beets for sugar	farms ..	849
		1.5	acres ..	201 111	1.1
		2.2	tons ..	3 415 499	.4
		1.8	Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	farms ..	15 695
		3.7	acres ..	2 467 853	1.9
		3.9	tons, dry ..	3 267 324	1.7
		2.3	farms ..	10 893	1.6
		2.8	acres ..	1 058 536	1.6
		2.3	tons, dry ..	1 598 591	1.5
		1.0	Alfalfa hay	farms ..	

¹Data are based on a sample of farms.

²Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains of less than \$1,000.

**Table D. Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More:
1992**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)			
F FARMS AND LAND IN FARMS								
Farms ----- number	25 430	1.7	Total farm production expenses ----- farms	25 587	1.7			
Land in farms ----- acres	36 849 516	1.1	\$1,000-----\$1,000	2 054 260	.9			
Average size of farm ----- acres	1 449	2.0	Average per farm ----- dollars	80 285	1.9			
M MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD								
Total sales (see text) ----- farms	25 430	1.7	Livestock and poultry purchased ----- farms	8 512	2.5			
\$1,000-----\$1,000	2 722 927	.8	\$1,000-----\$1,000	140 855	2.5			
Average per farm ----- dollars	107 075	1.9	Feed for livestock and poultry ----- farms	12 444	2.3			
Farms by value of sales:			Commercial mixed formula feeds ----- farms	102 174	2.1			
\$10,000 to \$19,999 ----- farms	3 474	2.6	\$1,000-----\$1,000	4 501	3.1			
\$1,000-----\$1,000	50 854	2.6	Seeds, bulbs, plants, and trees ----- farms	30 473	3.3			
\$20,000 to \$24,999 ----- farms	1 377	2.9	\$1,000-----\$1,000	19 958	1.8			
\$1,000-----\$1,000	30 641	2.9	Commercial fertilizer ----- farms	116 735	.9			
\$25,000 to \$39,999 ----- farms	3 521	2.7	\$1,000-----\$1,000	18 548	1.7			
\$1,000-----\$1,000	112 475	2.7	Agricultural chemicals ----- farms	199 537	.7			
\$40,000 to \$49,999 ----- farms	1 878	2.7	\$1,000-----\$1,000	19 636	1.8			
\$1,000-----\$1,000	83 802	2.7	Petroleum products ----- farms	160 233	.9			
\$50,000 to \$99,999 ----- farms	6 502	2.1	\$1,000-----\$1,000	25 382	1.7			
\$1,000-----\$1,000	467 032	2.0	Electricity ----- farms	176 372	1.1			
\$100,000 to \$249,999 ----- farms	6 525	.6	Hired farm labor ----- farms	22 072	1.8			
\$1,000-----\$1,000	1 004 031	.5	Contract labor ----- farms	32 236	1.3			
\$250,000 to \$499,999 ----- farms	1 640	—	\$1,000-----\$1,000	9 198	2.6			
\$1,000-----\$1,000	549 501	—	Repair and maintenance ----- farms	24 300	1.8			
\$500,000 or more ----- farms	513	—	\$1,000-----\$1,000	185 562	1.1			
\$1,000-----\$1,000	424 592	—	Customwork, machine hire, and rental of machinery and equipment ----- farms	14 044	2.0			
Sales by commodity or commodity group:			\$1,000-----\$1,000	63 138	1.5			
Crops, including nursery and greenhouse crops ----- farms	22 655	1.7	Interest expense ----- farms	18 769	1.8			
\$1,000-----\$1,000	2 019 660	.7	\$1,000-----\$1,000	209 204	1.1			
Grains ----- farms	22 088	1.6	Secured by real estate ----- farms	12 455	2.0			
\$1,000-----\$1,000	1 747 721	.7	\$1,000-----\$1,000	120 506	1.4			
Corn for grain ----- farms	2 449	1.0	Not secured by real estate ----- farms	13 416	1.9			
\$1,000-----\$1,000	61 111	.5	\$1,000-----\$1,000	88 698	1.3			
Wheat ----- farms	21 308	1.6						
\$1,000-----\$1,000	1 139 235	.8						
Soybeans ----- farms	2 778	1.0						
\$1,000-----\$1,000	80 102	.5						
Sorghum for grain ----- farms	14	5.9	NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)¹					
\$1,000-----\$1,000	88	8.9						
Barley ----- farms	12 127	1.3	All farms ----- number	25 587	1.7			
\$1,000-----\$1,000	221 706	.6	\$1,000-----\$1,000	666 076	1.2			
Oats ----- farms	3 969	2.1	Average per farm ----- dollars	26 032	2.1			
\$1,000-----\$1,000	19 969	1.6						
Other grains ----- farms	8 705	1.2	Farms with net gains ² ----- number	19 966	1.8			
\$1,000-----\$1,000	225 511	.5	\$1,000-----\$1,000	741 629	1.1			
			Average net gain ----- dollars	37 145	2.1			
Cotton and cottonseed ----- farms	—	—	Farms with net losses ----- number	5 621	3.2			
\$1,000-----\$1,000	—	—	\$1,000-----\$1,000	75 554	3.0			
Tobacco ----- farms	—	—	Average net loss ----- dollars	13 441	4.4			
\$1,000-----\$1,000	—	—						
Hay, silage, and field seeds ----- farms	4 182	1.9	GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME					
\$1,000-----\$1,000	29 340	1.6						
Vegetables, sweet corn, and melons ----- farms	81	4.0	Government payments ----- farms	21 024	1.6			
\$1,000-----\$1,000	902	5.1	\$1,000-----\$1,000	287 152	1.0			
Fruits, nuts, and berries ----- farms	16	7.8	Other farm-related income ¹ ----- farms	11 140	2.2			
\$1,000-----\$1,000	97	2.6	\$1,000-----\$1,000	55 646	3.3			
Nursery and greenhouse crops ----- farms	78	4.0	Customwork and other agricultural services ----- farms	3 336	3.3			
\$1,000-----\$1,000	6 629	2.7	\$1,000-----\$1,000	22 512	4.0			
Other crops ----- farms	1 311	1.0	Gross cash rent or share payments ----- farms	3 183	3.8			
\$1,000-----\$1,000	234 971	.3	\$1,000-----\$1,000	25 308	5.7			
Livestock, poultry, and their products ----- farms	14 327	1.9	Forest products and Christmas trees ----- farms	44	28.2			
\$1,000-----\$1,000	703 267	1.2	\$1,000-----\$1,000	156	7.2			
Poultry and poultry products ----- farms	324	2.6	Other farm-related income sources ----- farms	8 117	2.4			
\$1,000-----\$1,000	14 500	.7	\$1,000-----\$1,000	7 670	4.6			
Dairy products ----- farms	1 626	2.0						
\$1,000-----\$1,000	104 499	1.4						
Cattle and calves ----- farms	13 181	1.9						
\$1,000-----\$1,000	508 247	1.2						
Hogs and pigs ----- farms	1 737	1.9						
\$1,000-----\$1,000	51 349	1.1						
Sheep, lambs, and wool ----- farms	1 230	2.1						
\$1,000-----\$1,000	10 776	1.8						
Other livestock and livestock products (see text) ----- farms	732	2.1	COMMODITY CREDIT CORPORATION LOANS					
\$1,000-----\$1,000	13 897	1.9						
Value of agricultural products sold directly to individuals for human consumption (see text) ----- farms	345	2.4	Total ----- farms	5 618	1.4			
\$1,000-----\$1,000	728	2.3	\$1,000-----\$1,000	144 104	.6			

See footnotes at end of table.

C-10 APPENDIX C

1992 CENSUS OF AGRICULTURE

**Table D. Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More:
1992—Con.**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)		
LAND IN FARMS ACCORDING TO USE							
Total cropland	farms-- acres--	24 638 26 538 866	1.7 1.0	Individual or family (sole proprietorship) farms-- acres--	21 963 30 206 201	1.8 1.2	
Harvested cropland	farms-- acres--	24 242 18 936 099	1.7 .9	Partnership--	3 002 5 455 737	1.6 .8	
Cropland:				Corporation:			
Pasture or grazing only	farms-- acres--	6 498 1 582 065	1.9 1.9	Family held	farms-- acres--	322 646 618	1.0 .4
Total woodland	farms-- acres--	2 730 295 482	1.5 1.5	More than 10 stockholders	farms-- acres--	2 320	24.8 1.0
Pastureland and rangeland other than cropland and woodland pastured	farms-- acres--	11 869 8 785 833	1.9 1.2	10 or less stockholders	farms-- acres--	18	7.3
Land in house lots, ponds, roads, wasteland, etc.	farms-- acres--	15 624 1 229 335	1.7 1.4	Other than family held	farms-- acres--	19 25 529	7.3 7.9
Irrigated land	farms-- acres--	762 185 948	1.5 .8	More than 10 stockholders	farms-- acres--	1 1	43.3
Harvested cropland irrigated	farms-- acres--	748 180 834	1.4 .8	10 or less stockholders	farms-- acres--	320 18	7.3
Pasture and other land irrigated	farms-- acres--	51 5 114	4.1 11.9	Other—cooperative, estate or trust, institutional, etc.	farms-- acres--	124 515 431	3.3 .8
Land under federal acreage reduction programs:				Hired farm labor			
Diverted under annual commodity programs	farms-- acres--	13 171 542 924	1.5 .8	Hired workers by days worked:			
Conservation Reserve or Wetlands Reserve Programs	farms-- acres--	7 106 1 745 294	1.7 1.6	150 days or more	farms-- workers--	4 306 6 941	2.3 1.7
VALUE OF LAND AND BUILDINGS¹							
Estimated market value of land and buildings	farms-- \$1,000--	25 587 12 193 760	1.7 1.1	Less than 150 days	farms-- workers--	9 840 28 555	2.0 2.0
Average per farm	dollars--	476 561	2.1				
Average per acre	dollars--	332	1.6				
VALUE OF MACHINERY AND EQUIPMENT¹							
Estimated market value of all machinery and equipment	farms-- \$1,000--	25 586 2 608 505	1.7 1.2	Injuries and deaths:			
Average per farm	dollars--	101 950	2.1	Farm-related injuries:			
				Operator and family members	farms-- number--	401 451	2.2 2.2
AGRICULTURAL CHEMICALS¹				Hired workers	farms-- number--	139 167	1.5 1.3
Commercial fertilizer	farms-- acres on which used--	18 543 13 824 716	1.7 .8	Farm-related deaths:			
				Operator and family members	farms-- number--	4 (D)	14.7 (D)
TENURE OF OPERATOR				Hired workers	farms-- number--	1 (D)	— (D)
All operators	farms-- acres--	25 430 36 849 516	1.7 1.1	F FARMS BY SIZE			
Full owners	farms-- acres--	6 121 5 829 823	2.3 1.7	1 to 9 acres	farms--	349	2.8
Part owners	farms-- acres--	15 107	1.4	10 to 49 acres	farms--	267	3.1
Tenants	farms-- acres--	26 917 778 4 202	.9 2.2	50 to 69 acres	farms--	95	4.3
		4 101 915	1.5	70 to 99 acres	farms--	157	3.5
OWNED AND RENTED LAND				100 to 139 acres	farms--	223	3.3
Land owned	farms-- acres--	21 529 19 894 727	1.7 1.3	140 to 179 acres	farms--	613	2.8
Owned land in farms	farms-- acres--	21 228 18 277 841	1.7 1.3	180 to 219 acres	farms--	274	3.1
Land rented or leased from others	farms-- acres--	19 389 18 799 295	1.6 .9	220 to 259 acres	farms--	354	3.0
Rented or leased land in farms	landlords-- farms-- acres--	57 481 19 309 18 571 675	1.2 1.5 .9	260 to 499 acres	farms--	2 922	2.6
Land rented or leased to others	farms-- acres--	4 118 1 844 506	1.9 1.8	500 to 999 acres	farms--	6 037	2.5
				1,000 to 1,999 acres	farms--	8 506	1.7
				2,000 acres or more	farms--	5 633	.5
OPERATOR CHARACTERISTICS							
Operators by place of residence:				F FARMS BY STANDARD INDUSTRIAL CLASSIFICATION			
On farm operated		18 648	1.7	Cash grains (011)	farms--	16 144	1.5
Not on farm operated		4 897	2.1	Field crops, except cash grains (013)	farms--	953	1.5
Not reported		1 885	1.4	Vegetables and melons (016)	farms--	13	10.7
Operators by principal occupation:				Fruits and tree nuts (017)	farms--	1	—
Farming		22 500	1.6	Horticultural specialties (018)	farms--	56	4.8
Other		2 930	2.4	General farms, primarily crop (019)	farms--	224	2.7
Operators by days worked off farm:				Livestock, except dairy, poultry, and animal specialties (021)	farms-- number--	6 550	2.2
Any		8 531	2.0	Dairy farms (024)	farms-- number--	1 003	2.2
200 days or more		2 759	2.4	Poultry and eggs (025)	farms-- number--	36	4.1
Operators by sex:				Animal specialties (027)	farms-- number--	139	3.3
Male		24 932	1.7	General farms, primarily livestock and animal specialties (029)	farms-- number--	311	2.3
Female		498	2.5				
Average age of operator	years--	49.4	2.5	LIVESTOCK			

See footnotes at end of table.

**Table D. Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More:
1992—Con.**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
POULTRY					
Chickens 3 months old or older inventory	farms-- number--	599 (D)	Barley for grain	farms-- acres-- bushels--	13 562 2 375 585 142 256 519
Hens and pullets of laying age	farms-- number--	591 239 541	Oats for grain	farms-- acres-- bushels--	7 331 542 705 32 738 637
Broilers and other meat-type chickens sold	farms-- number--	92 30 639	Sunflower seed	farms-- acres-- pounds--	5 216 1 127 091 1 258 010 246
CROPS HARVESTED					
Corn for grain or seed	farms-- acres-- bushels--	3 293 .6 593 164	Soybeans for beans	farms-- acres-- bushels--	2 785 630 131 16 074 443
Corn for silage or green chop	farms-- acres-- tons, green--	37 398 250 3 381 1 701 748	Dry edible beans, excluding dry limas	farms-- acres-- cwt--	1 922 410 065 5 272 703
Wheat for grain	farms-- acres-- bushels--	10 508 186 .9 406 922 600	Irish potatoes	farms-- acres-- cwt--	423 139 474 25 927 871
			Sugar beets for sugar	farms-- acres-- tons--	848 (D) (D)
			Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	farms-- acres-- tons, dry--	13 444 2 340 490 3 138 368
			Alfalfa hay	farms-- acres-- tons, dry--	9 582 1 005 017 1 538 767

¹Data are based on a sample of farms.

²Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains of less than \$1,000.

Table E. Reliability Estimates of Percent Change in State Totals: 1987 to 1992

[For meaning of abbreviations and symbols, see introductory text]

Item	All farms		Farms with sales of \$10,000 or more	
	Percent change from 1987 to 1992	Standard error of estimate	Percent change from 1987 to 1992	Standard error of estimate
Farms-----number--	-11.8	1.8	-10.1	1.8
Land in farms -----acres--	-2.2	1.3	-2.7	1.3
Average size of farm -----acres--	10.8	2.7	8.2	2.6
Estimated market value of land and buildings ¹ :				
Average per farm -----dollars--	15.4	2.9	12.1	2.8
Average per acre -----dollars--	5.0	2.2	4.1	2.1
Estimated market value of all machinery and equipment ¹ :				
Average per farm -----dollars--	12.6	2.9	12.8	2.9
Farms by size:				
1 to 9 acres -----	-10.4	2.4	-8.4	3.2
10 to 49 acres -----	-20.8	1.9	-2.9	3.7
50 to 179 acres -----	-2.6	2.3	36.0	4.3
180 to 499 acres -----	-18.9	2.3	-13.7	2.5
500 to 999 acres -----	-22.3	2.2	-24.1	2.2
1,000 to 1,999 acres -----	-12.7	1.8	-13.4	1.8
2,000 acres or more -----	13.9	.8	13.8	.8
Total cropland -----farms--	-12.7	1.8	-10.6	1.8
acres--	-2.6	1.3	-1.9	1.3
Harvested cropland -----farms--	-14.1	1.7	-11.3	1.8
acres--	4.6	1.2	6.0	1.2
Irrigated land -----farms--	.9	1.9	3.5	1.9
acres--	11.4	1.3	11.8	1.3
Market value of agricultural products sold -----\$1,000--	25.5	1.3	26.2	1.3
Average per farm -----dollars--	42.3	3.2	40.4	3.2
Crops, including nursery and greenhouse crops -----\$1,000--	35.6	1.2	36.6	1.1
Livestock, poultry, and their products -----\$1,000--	3.5	1.5	3.7	1.5
Farms by value of sales:				
Less than \$2,500 -----	-5.4	1.5	(X)	(X)
\$2,500 to \$4,999 -----	-22.1	2.0	(X)	(X)
\$5,000 to \$9,999 -----	-26.5	1.9	(X)	(X)
\$10,000 to \$24,999 -----	-28.8	2.1	-28.8	2.1
\$25,000 to \$49,999 -----	-30.1	2.1	-30.1	2.1
\$50,000 to \$99,999 -----	-16.7	2.0	-16.7	2.0
\$100,000 to \$249,999 -----	34.4	1.0	34.4	1.0
\$250,000 to \$499,999 -----	93.9	.1	93.9	.1
\$500,000 or more -----	108.5	—	108.5	—
Total farm production expenses ¹ -----\$1,000--	13.2	2.1	14.1	2.1
Average per farm -----dollars--	28.4	3.0	27.1	3.0
Net cash return from agricultural sales for the farm unit (see text) ¹ -----\$1,000--	-11.8	1.8	-10.2	1.8
Average per farm -----dollars--	96.1	4.4	91.7	4.2
Operators by principal occupation:				
Farming -----	-13.2	1.7	-12.0	1.7
Other -----	-5.2	2.2	7.6	3.0
Operators by days worked off farm:				
Any -----	-10.0	4.8	-4.6	5.1
200 days or more -----	-7.2	5.0	7.1	5.9
Livestock and poultry:				
Cattle and calves inventory -----farms--	-11.5	2.0	-10.5	2.1
number--	-8.0	1.5	-7.6	1.5
Beef cows -----farms--	-8.3	2.0	-7.8	2.1
number--	-5.5	1.7	-5.0	1.7
Milk cows -----farms--	-32.2	1.7	-30.0	1.8
number--	-22.3	1.6	-21.9	1.6
Cattle and calves sold -----farms--	-12.5	1.9	-11.1	2.0
number--	-11.6	1.4	-11.2	1.4
Hogs and pigs inventory -----farms--	-18.3	1.8	-19.1	1.9
number--	17.5	1.8	17.6	1.9
Hogs and pigs sold -----farms--	-15.7	1.9	-17.4	1.9
number--	20.8	1.9	20.7	1.9
Sheep and lambs inventory -----farms--	19.3	2.5	-1.9	2.5
number--	-49.8	1.4	-50.5	1.6
Chickens 3 months old or older inventory -----farms--	.2	1.1	(D)	(D)
number--	-47.5	2.0	-60.0	1.9
Broilers and other meat-type chickens sold -----farms--	-26.8	3.5	-20.3	4.1
Selected crops harvested:				
Corn for grain or seed -----farms--	-36.9	.9	-35.6	.9
acres--	11.6	.9	12.3	.9
bushels--	-20.2	.6	-20.0	.6
Corn for silage or green chop -----farms--	-19.6	1.7	-18.6	1.7
acres--	15.7	1.8	16.4	1.8
tons, green	-6.8	1.4	-6.3	1.4
Wheat for grain -----farms--	-18.9	1.6	-14.7	1.7
acres--	21.1	1.4	23.3	1.4
bushels--	64.8	1.7	66.9	1.7
Barley for grain -----farms--	-32.9	1.2	-29.5	1.2
acres--	-11.2	.9	-10.0	.9
bushels--	18.4	1.1	19.5	1.1
Oats for grain -----farms--	-19.5	1.9	-16.1	2.0
acres--	-15.2	1.7	-13.3	1.7
Sunflower seed -----farms--	-24.9	1.1	-23.5	1.1
acres--	-19.7	.6	-19.4	.6
pounds--	-34.2	.5	-34.0	.5
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text) -----farms--	-12.6	2.0	-12.5	2.0
acres--	-6.4	1.9	-6.5	1.8
tons, dry	-18.9	1.5	-19.0	1.5

¹Data are based on a sample of farms.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-13

Table F. Reliability Estimates for the State and County Totals: 1992

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms		Land in farms		Average size of farm		Average market value of land and buildings per farm ¹		Estimated market value of all machinery and equipment ¹	
	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
North Dakota -	31 123	1.7	39 438 144	1.1	1 267	2.0	422 936	2.1	2 715 228	1.3
Adams -----	353	1.9	594 587	1.2	1 684	2.2	312 775	7.2	21 666	3.5
Barnes -----	839	1.2	858 267	.7	1 023	1.4	418 840	3.5	85 891	2.4
Benson -----	635	1.7	777 675	1.0	1 225	1.9	417 121	6.4	57 311	3.8
Billings -----	242	2.8	818 893	1.0	3 384	3.0	508 630	5.0	18 392	13.5
Bottineau -----	798	1.5	950 031	.9	1 191	1.8	396 348	3.8	73 252	4.6
Bowman -----	343	2.2	677 945	1.4	1 977	2.7	335 067	3.8	23 521	6.8
Burke -----	462	2.5	559 385	2.1	1 211	3.3	303 788	3.9	32 856	5.9
Burleigh -----	795	2.8	877 382	2.3	1 104	3.6	285 398	6.0	36 180	5.2
Cass -----	1 004	1.0	1 070 528	.5	1 066	1.2	763 164	2.4	127 506	2.3
Cavalier -----	743	1.3	855 458	.8	1 151	1.5	511 372	2.6	86 424	4.3
Dickey -----	552	2.9	627 774	1.7	1 137	3.3	332 070	3.8	43 592	3.7
Divide -----	527	2.2	725 974	1.9	1 378	2.9	415 366	21.9	33 136	5.5
Dunn -----	650	2.5	1 352 738	1.3	2 081	2.8	412 498	3.7	42 096	5.2
Eddy -----	312	1.8	369 140	1.4	1 183	2.2	338 735	5.5	22 428	4.2
Emmons -----	759	2.2	834 293	1.7	1 099	2.8	254 847	5.9	51 028	4.7
Foster -----	297	1.9	366 292	1.3	1 233	2.3	442 070	9.2	35 274	9.6
Golden Valley -----	219	1.6	505 461	.6	2 308	1.7	414 096	5.4	16 625	5.5
Grand Forks -----	751	1.0	769 225	.5	1 024	1.1	694 931	2.1	97 743	4.0
Grant -----	598	2.6	1 019 300	1.7	1 705	3.2	333 267	8.9	42 609	6.1
Griggs -----	382	1.0	396 154	.8	1 037	1.3	350 431	4.4	34 923	3.6
Hettinger -----	427	2.2	688 468	1.6	1 612	2.7	413 554	3.4	37 741	3.3
Kidder -----	499	2.8	723 816	2.2	1 451	3.6	320 477	10.4	36 080	10.2
LaMoure -----	679	2.2	669 049	1.5	985	2.7	376 732	10.0	59 498	2.9
Logan -----	472	2.7	598 832	2.2	1 269	3.4	324 752	4.5	34 402	4.0
McHenry -----	889	2.6	1 048 701	1.9	1 180	3.2	269 330	4.0	46 943	3.7
McIntosh -----	483	2.3	544 767	1.7	1 128	2.9	284 725	9.0	31 392	4.4
McKenzie -----	741	2.0	1 165 695	1.2	1 573	2.3	467 762	6.8	55 829	7.4
McLean -----	926	2.6	1 128 346	1.9	1 219	3.2	388 190	5.3	73 108	6.8
Mercer -----	527	2.4	531 643	2.1	1 009	3.2	270 816	4.9	26 599	7.5
Morton -----	923	2.6	1 233 663	1.9	1 337	3.2	287 735	9.2	56 083	4.4
Mountrain -----	745	2.6	1 000 679	2.0	1 343	3.3	425 194	5.3	50 813	5.5
Nelson -----	482	1.8	552 707	1.2	1 147	2.2	423 768	6.2	47 923	3.6
Oliver -----	326	2.3	384 213	1.9	1 179	3.0	276 092	6.5	22 596	11.1
Pembina -----	624	1.1	600 845	.5	963	1.2	783 025	2.0	89 607	2.4
Pierce -----	501	2.7	586 244	2.0	1 170	3.4	350 090	9.2	33 285	4.6
Ramsey -----	511	1.4	639 709	.8	1 252	1.7	454 947	3.7	62 078	6.9
Ransom -----	451	2.2	485 012	1.1	1 075	2.4	424 166	3.6	39 757	3.2
Renville -----	396	1.4	503 575	.9	1 272	1.7	424 080	2.4	39 332	4.9
Richland -----	956	1.3	799 606	.7	836	1.5	618 053	2.1	116 191	2.3
Rolette -----	486	2.3	522 536	2.0	1 075	3.1	327 110	9.1	30 784	5.7
Sargent -----	481	1.5	495 509	.9	1 030	1.7	391 421	3.4	49 924	4.4
Sheridan -----	419	2.8	521 343	2.3	1 244	3.7	347 359	8.3	24 883	6.9
Sioux -----	200	2.6	745 815	.9	3 729	2.7	790 252	7.5	12 245	7.1
Slope -----	270	1.3	785 713	.7	2 910	1.5	493 238	3.8	18 894	4.4
Stark -----	788	2.8	841 736	2.3	1 068	3.6	300 355	6.7	49 490	5.1
Steele -----	335	.9	439 846	.6	1 313	1.1	596 445	2.9	48 663	4.7
Stutsman -----	988	1.8	1 269 572	.9	1 285	2.0	398 386	3.6	97 819	3.3
Towner -----	462	1.1	591 185	.7	1 280	1.3	431 713	4.8	45 864	7.8
Traill -----	517	1.1	501 057	.6	969	1.3	778 964	2.6	80 076	3.4
Walsh -----	780	1.5	737 273	.7	945	1.7	610 383	2.3	104 254	2.4
Ward -----	1 107	1.8	1 160 916	1.3	1 049	2.2	356 218	2.9	86 971	4.9
Wells -----	638	2.2	750 913	1.4	1 177	2.6	379 570	4.7	55 559	3.5
Williams -----	833	2.4	1 182 658	1.7	1 420	3.0	357 973	4.0	68 094	7.5
Geographic area	Average market value of all machinery and equipment per farm ¹		Market value of agricultural products sold		Average market value of agricultural products sold per farm		Farm production expenses ¹			
	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
North Dakota -	87 290	2.2	2 745 752	.8	88 223	1.9	31 124	1.7	2 090 938	.9
Adams -----	61 378	4.0	23 457	1.1	66 450	2.2	353	1.8	17 752	2.6
Barnes -----	102 251	2.7	91 396	.6	108 935	1.4	840	1.2	66 809	1.2
Benson -----	90 254	4.2	47 536	.8	74 860	1.8	635	1.8	39 872	2.6
Billings -----	75 685	13.8	10 361	2.5	42 814	3.7	243	3.0	8 966	10.1
Bottineau -----	91 910	4.8	56 496	.8	70 797	1.7	797	1.4	39 812	2.3
Bowman -----	68 376	7.1	19 540	1.5	56 967	2.7	344	1.9	13 718	4.3
Burke -----	70 963	6.4	23 723	1.8	51 349	3.1	463	2.4	16 241	4.4
Burleigh -----	45 509	6.0	37 644	2.1	47 351	3.5	795	2.9	30 371	4.3
Cass -----	126 871	2.6	160 826	.4	160 185	1.1	1 005	1.2	124 102	1.0
Cavalier -----	116 318	4.5	86 447	.7	116 349	1.5	743	1.3	64 560	1.5
Dickey -----	78 971	4.6	60 944	1.2	110 405	3.1	552	2.8	48 342	3.2
Divide -----	62 877	6.0	27 114	1.8	51 451	2.8	527	2.3	17 937	4.3
Dunn -----	65 673	5.9	37 101	1.9	57 079	3.1	650	2.4	27 136	3.6
Eddy -----	72 115	4.4	21 896	1.3	70 179	2.2	311	1.2	18 500	4.5

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Average market value of all machinery and equipment per farm ¹		Market value of agricultural products sold		Average market value of agricultural products sold per farm		Farm production expenses ¹			
	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total farm production expenses			
							Farms		Value	
							Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Emmons -----	67 230	6.0	48 920	1.5	64 453	2.7	759	3.7	35 883	3.2
Foster -----	118 767	9.8	31 357	1.1	105 578	2.2	297	2.2	26 098	6.4
Golden Valley -----	76 259	6.4	16 337	.7	74 599	1.7	218	3.2	11 487	6.1
Grand Forks -----	130 150	4.2	133 567	.3	177 853	1.1	751	1.2	103 354	.8
Grant -----	71 252	6.7	38 947	1.8	65 128	3.2	598	2.7	29 655	3.6
Griggs -----	91 421	3.8	33 796	.7	88 472	1.2	382	1.1	25 383	2.6
Hettinger -----	88 387	4.1	38 571	1.3	90 331	2.6	427	2.4	27 595	2.2
Kidder -----	72 305	10.6	30 002	2.0	60 125	3.4	499	2.9	23 304	4.8
LaMoure -----	87 755	3.8	69 379	1.3	102 179	2.6	678	2.4	48 930	2.1
Logan -----	72 886	5.0	37 738	1.8	79 953	3.2	472	3.0	27 969	3.6
McHenry -----	52 804	4.5	47 252	1.7	53 152	3.1	889	2.6	36 023	3.9
McIntosh -----	64 994	5.1	34 814	1.4	72 079	2.7	483	2.7	25 084	3.9
McKenzie -----	75 546	7.7	49 220	1.3	66 423	2.4	739	2.0	35 784	3.5
McLean -----	78 950	7.4	60 308	1.5	65 128	3.0	926	3.0	42 897	3.2
Mercer -----	50 377	7.9	22 264	1.9	42 246	3.1	528	2.7	17 348	3.9
Morton -----	60 762	5.2	61 974	1.6	67 144	3.1	923	2.7	48 307	3.1
Mountrain -----	68 298	6.1	40 769	1.8	54 724	3.2	744	2.7	29 481	2.9
Nelson -----	99 220	4.0	48 272	1.0	100 149	2.1	483	1.8	37 329	2.5
Oliver -----	69 525	11.4	17 994	1.8	55 197	2.9	325	2.5	14 355	8.1
Pembina -----	143 601	2.7	114 179	.4	182 980	1.2	625	1.2	89 073	1.2
Pierce -----	66 437	5.3	31 191	1.7	62 258	3.2	501	2.6	25 438	2.7
Ramsey -----	122 926	7.2	50 740	.7	99 295	1.6	512	1.9	36 748	2.1
Ransom -----	88 153	3.5	51 296	1.0	113 739	2.4	451	1.4	40 490	2.7
Renville -----	99 323	5.1	32 322	.9	81 622	1.6	396	1.4	21 040	3.8
Richand -----	121 666	2.7	130 800	.6	136 820	1.4	955	1.3	101 213	.8
Rolette -----	63 342	6.3	28 902	1.6	59 470	2.8	486	2.5	21 678	3.5
Sargent -----	103 793	4.9	54 531	.7	113 369	1.7	481	2.2	40 640	2.0
Sheridan -----	59 386	7.5	21 491	2.2	51 292	3.6	419	2.9	18 012	3.7
Sioux -----	61 224	7.6	13 838	1.5	69 191	2.9	200	2.8	11 301	7.2
Slope -----	69 976	4.7	18 688	1.0	69 216	1.6	271	1.7	14 650	3.4
Stark -----	62 884	5.8	42 112	2.0	53 441	3.4	787	2.9	33 875	2.7
Steele -----	145 262	4.9	49 645	.5	148 194	1.1	335	1.4	36 440	3.3
Stutsman -----	99 007	4.0	98 991	.7	100 193	1.9	988	2.2	74 350	1.7
Towner -----	99 487	8.0	45 058	.6	97 528	1.2	461	1.8	31 015	2.7
Traill -----	154 887	3.7	85 464	.5	165 308	1.2	517	1.3	69 848	2.0
Walsh -----	133 659	2.8	137 832	.5	176 708	1.6	780	1.5	114 848	1.1
Ward -----	78 494	5.3	72 169	1.1	65 193	2.1	1 108	1.9	54 582	2.9
Wells -----	86 946	4.2	54 598	1.2	85 577	2.5	639	2.4	42 061	2.8
Williams -----	81 746	7.8	45 942	1.6	55 152	2.9	833	2.3	33 251	2.7
Farm production expenses ¹ —Con.										
Geographic area	Livestock and poultry purchased			Feed for livestock and poultry			Seeds, bulbs, plants, and trees			
	Farms		Value		Farms		Value		Farms	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
	North Dakota -	9 615	2.5	143 982	2.5	14 372	2.2	104 335	2.1	21 636
Adams -----	142	11.3	2 805	11.9	219	8.3	1 336	6.1	213	8.2
Barnes -----	201	9.8	1 796	6.0	333	7.0	1 708	10.7	689	2.9
Benson -----	160	14.1	1 373	6.9	232	8.8	1 548	5.4	434	4.9
Billings -----	126	15.1	856	17.3	190	8.6	1 839	18.5	125	14.1
Bottineau -----	157	13.8	1 269	45.1	238	10.1	774	18.6	556	5.0
Bowman -----	118	13.5	1 559	11.0	245	6.2	1 623	8.2	158	11.0
Burke -----	121	16.6	518	23.4	142	14.4	246	24.8	276	8.3
Burleigh -----	291	10.8	4 004	5.2	437	6.8	2 593	5.9	442	8.5
Cass -----	249	11.9	6 714	9.1	303	10.4	4 446	11.1	776	4.0
Cavalier -----	92	20.3	519	45.3	158	15.2	670	25.4	607	2.8
Dickey -----	207	14.1	5 322	13.8	280	10.3	3 240	5.3	350	8.6
Divide -----	128	13.5	831	12.8	209	10.4	834	14.7	324	7.6
Dunn -----	313	8.1	4 314	10.0	451	6.1	2 389	5.6	405	6.0
Eddy -----	145	12.6	1 765	30.2	187	11.2	991	7.7	248	8.1
Emmons -----	304	8.6	5 677	9.9	410	6.5	3 853	5.8	516	6.9
Foster -----	84	25.6	1 522	51.0	131	17.4	2 259	44.6	228	10.1
Golden Valley -----	68	25.1	766	17.3	99	17.9	887	13.8	129	14.3
Grand Forks -----	96	20.9	4 970	5.1	202	12.4	2 076	22.5	626	3.2
Grant -----	283	9.5	3 426	17.5	401	5.8	2 926	5.4	402	5.1
Griggs -----	85	16.3	577	30.2	141	12.8	371	15.0	321	3.4
Hettinger -----	150	12.4	2 180	14.1	196	10.2	1 945	9.2	297	5.9
Kidder -----	217	10.0	2 610	14.9	296	8.4	2 102	7.3	285	8.6
LaMoure -----	229	10.3	3 238	6.8	329	8.2	3 894	4.2	565	4.0
Logan -----	207	10.1	5 732	4.8	340	6.7	2 728	4.2	334	6.6
McHenry -----	345	9.6	3 506	25.4	568	6.3	3 390	15.2	489	7.0
McIntosh -----	199	10.3	5 353	12.1	306	7.7	1 939	5.6	326	7.1
McKenzie -----	293	10.4	4 331	14.1	430	8.0	2 215	6.9	423	7.6
McLean -----	330	12.1	3 580	7.7	454	9.2	1 625	6.5	541	7.7
Mercer -----	246	12.2	2 706	11.8	291	9.9	1 458	7.4	292	8.7

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-15

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Livestock and poultry purchased				Feed for livestock and poultry				Seeds, bulbs, plants, and trees			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Morton -----	455	8.1	8 165	15.2	636	5.0	5 942	4.8	676	5.5	1 479	6.7
Mounttrail -----	225	11.7	2 157	12.0	393	7.0	1 226	13.7	422	6.7	1 110	7.9
Nelson -----	69	13.7	752	4.7	153	11.3	2 838	6.7	362	5.8	2 467	3.7
Oliver -----	156	15.1	1 936	26.5	232	8.4	1 428	11.5	229	6.4	426	12.5
Pembina -----	87	17.7	2 386	5.0	120	16.4	1 021	5.9	544	2.7	6 390	4.6
Pierce -----	178	13.0	2 833	8.6	279	9.1	1 687	4.5	392	5.8	1 265	4.9
Ramsey -----	46	17.5	615	10.9	76	15.3	246	11.5	396	5.1	2 390	3.6
Ransom -----	188	11.9	3 027	13.8	227	9.5	3 182	5.5	378	4.4	2 984	2.8
Renville -----	58	21.0	1 008	71.0	118	16.2	441	12.7	280	7.2	862	4.3
Richland -----	247	12.5	5 228	6.1	368	8.4	5 389	7.6	794	3.8	7 452	2.2
Rolette -----	185	11.5	1 625	8.2	259	10.0	1 229	16.9	259	8.5	970	5.7
Sargent -----	145	13.0	2 094	6.2	229	9.7	2 164	4.0	412	3.8	3 665	2.5
Sheridan -----	133	16.3	1 060	14.9	217	11.8	1 098	14.7	237	10.3	827	7.8
Sioux -----	99	14.9	1 659	15.4	121	11.8	1 254	13.1	146	9.4	277	19.9
Slope -----	140	10.2	1 387	8.5	147	9.0	1 095	8.8	169	8.9	402	8.4
Stark -----	324	9.0	5 752	7.1	503	6.5	3 482	6.2	471	6.7	648	5.7
Steele -----	62	24.3	314	11.4	99	14.6	324	4.9	296	3.8	3 010	3.6
Stutsman -----	328	9.9	5 405	7.7	499	6.6	4 466	10.2	661	5.1	3 550	2.7
Towner -----	46	28.4	234	7.3	98	16.2	516	8.9	357	5.4	1 837	3.5
Traill -----	60	21.9	1 456	5.8	91	19.2	1 452	40.5	479	2.1	5 934	4.9
Walsh -----	144	16.6	1 858	36.6	228	11.0	916	16.2	662	3.3	8 228	1.6
Ward -----	246	12.3	4 828	25.8	427	8.7	2 179	8.2	675	5.6	2 572	3.2
Wells -----	195	12.7	2 939	7.5	315	8.6	1 725	13.2	494	5.5	2 583	3.8
Williams -----	213	14.7	1 445	10.9	319	11.0	1 129	10.5	468	6.9	1 216	7.0
Geographic area	Farm production expenses ¹ —Con.											
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
North Dakota -	19 856	1.7	200 797	.7	21 373	1.8	161 765	.9	30 299	1.8	181 040	1.1
Adams -----	176	11.4	767	5.1	191	8.5	894	9.7	320	3.8	1 635	4.4
Barnes -----	648	3.2	8 458	1.5	649	3.3	5 895	1.7	820	1.9	6 057	2.0
Benson -----	475	4.9	3 959	3.1	490	5.1	3 440	4.1	618	2.4	4 104	3.0
Billings -----	69	22.7	160	14.9	65	21.8	139	30.6	233	4.5	813	7.8
Bottineau -----	523	5.4	4 669	3.0	553	4.8	3 819	3.6	782	1.9	3 979	2.3
Bowman -----	134	12.4	708	5.4	140	11.8	824	16.7	317	4.5	1 431	5.4
Burke -----	297	7.1	1 383	4.5	285	7.8	1 519	7.2	454	2.7	1 984	4.7
Burleigh -----	351	10.5	1 284	8.8	345	10.1	1 476	20.3	748	4.0	2 962	5.7
Cass -----	822	3.4	14 413	2.0	791	3.7	10 919	1.8	994	1.5	8 237	1.8
Cavalier -----	640	3.3	9 971	2.0	616	3.9	6 779	2.7	728	1.6	6 221	3.0
Dickey -----	301	9.5	4 296	2.7	409	6.2	3 605	3.6	537	3.8	4 079	4.6
Divide -----	254	9.4	818	6.6	411	4.7	1 628	6.3	505	2.9	2 280	4.3
Dunn -----	342	7.8	1 221	8.5	285	9.7	746	10.5	630	3.0	2 824	3.9
Eddy -----	221	5.4	1 567	6.7	247	7.5	1 251	7.8	298	2.5	1 719	3.6
Emmons -----	332	8.1	1 632	4.6	379	8.5	1 724	8.5	744	3.9	3 281	4.0
Foster -----	217	10.5	3 110	5.8	231	9.9	2 248	6.6	248	8.8	2 093	6.9
Golden Valley -----	171	10.3	898	7.5	179	8.8	897	9.6	211	3.7	1 023	7.8
Grand Forks -----	619	3.2	12 571	1.6	634	3.3	9 000	1.9	726	2.2	7 147	1.9
Grant -----	329	6.7	1 297	5.9	316	8.0	1 416	8.5	588	3.0	2 798	3.7
Griggs -----	296	3.5	3 191	2.2	290	4.7	2 312	3.5	370	1.6	2 371	3.8
Hettinger -----	327	5.6	2 750	2.6	324	5.4	2 414	3.7	417	2.7	2 372	3.4
Kidder -----	157	14.8	669	13.0	244	9.9	729	9.0	498	2.9	2 452	7.1
LaMoure -----	517	4.8	4 623	3.0	548	4.6	3 401	3.5	668	2.8	4 571	2.4
Logan -----	207	10.6	908	8.7	285	7.4	1 213	9.1	472	3.0	2 451	5.3
McHenry -----	479	7.3	2 080	4.1	589	6.1	2 318	10.0	856	3.0	3 568	4.0
McIntosh -----	177	10.3	735	8.7	304	7.5	1 232	8.7	466	3.6	2 504	4.4
McKenzie -----	374	8.1	2 217	6.5	417	7.7	1 705	11.0	717	2.5	3 519	3.9
McLean -----	532	8.0	3 257	5.4	623	6.9	3 434	6.3	907	3.2	4 362	3.9
Mercer -----	226	10.7	816	7.1	268	9.8	642	11.5	503	3.4	1 673	7.0
Morton -----	527	7.4	1 980	4.5	546	7.0	1 856	6.6	896	3.1	3 919	3.6
Mounttrail -----	360	8.4	1 744	4.9	444	6.5	2 093	6.6	737	2.9	3 192	3.8
Nelson -----	379	5.6	5 276	3.1	393	5.0	3 355	5.2	461	3.3	3 287	3.0
Oliver -----	209	7.3	607	7.0	135	12.7	617	10.1	312	3.3	1 246	6.7
Pembina -----	523	1.9	10 613	1.8	539	3.2	7 584	1.7	612	1.8	6 171	2.3
Pierce -----	338	7.5	2 094	5.0	387	5.3	2 001	6.0	500	2.6	2 602	3.3
Ramsey -----	450	3.2	5 527	2.8	399	4.9	3 682	4.5	504	2.1	3 802	3.4
Ransom -----	347	5.2	4 397	4.0	322	8.2	2 763	3.1	448	1.4	3 010	3.6
Renville -----	273	7.5	2 382	2.1	339	4.9	1 969	4.1	395	1.4	2 293	3.3
Richland -----	780	4.1	11 747	1.8	680	4.0	8 141	1.5	945	1.6	7 135	1.7
Rolette -----	274	8.1	2 145	7.5	293	9.5	1 609	9.4	468	2.9	2 250	4.8
Sargent -----	396	4.3	4 381	2.8	402	4.1	4 009	2.5	473	2.5	3 063	2.7
Sheridan -----	211	11.3	1 293	6.3	270	8.7	1 354	11.1	419	2.9	2 071	4.9
Sioux -----	53	24.7	206	4.7	67	20.7	330	33.3	197	2.8	962	8.7
Slope -----	161	8.1	751	5.8	176	8.2	954	10.1	254	3.4	1 545	6.3

See footnotes at end of table.

C-16 APPENDIX C

1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Stark -----	439	7.6	1 520	4.3	497	6.2	1 666	6.4	741	3.5	2 920	4.2
Steele -----	304	3.8	5 020	3.3	308	2.8	3 362	3.2	326	2.7	3 193	3.4
Stutsman -----	617	5.5	6 878	2.5	719	5.0	5 592	3.9	985	2.2	6 258	1.9
Towner -----	411	3.8	4 017	4.1	393	4.8	3 033	4.9	452	2.4	3 164	3.1
Traill -----	477	2.4	8 175	3.2	451	2.6	6 878	4.7	505	2.1	4 810	2.6
Walsh -----	627	4.3	14 444	1.5	668	2.7	10 559	1.2	776	1.5	7 062	1.3
Ward -----	693	5.2	4 738	2.8	749	4.4	4 263	4.8	1 081	2.2	5 115	2.6
Wells -----	477	5.2	4 956	3.8	482	5.7	3 542	5.3	631	2.6	3 573	3.2
Williams -----	317	10.1	1 479	5.5	606	5.3	2 937	5.7	806	2.8	3 888	4.4
Farm production expenses ¹ —Con.												
Geographic area	Electricity				Hired farm labor				Contract labor			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
	North Dakota -----	25 489	1.8	33 698	1.3	11 895	1.9	.7	2 800	3.7	9 370	2.6
Adams -----	282	5.2	374	4.9	130	12.3	661	11.4	24	30.5	39	6.3
Barnes -----	686	3.2	911	3.4	256	5.1	2 215	1.5	64	13.8	356	4.7
Benson -----	549	3.8	735	6.0	289	9.0	1 570	4.9	54	17.0	224	23.3
Billings -----	216	6.6	156	7.4	80	21.6	367	35.7	19	51.2	38	56.5
Bottineau -----	613	4.2	653	6.0	256	8.0	1 369	3.2	85	18.6	166	18.1
Bowman -----	272	6.6	340	9.0	73	15.7	445	1.1	32	30.6	94	24.9
Burke -----	367	5.9	322	10.4	124	15.3	553	7.6	47	29.7	116	24.7
Burleigh -----	626	5.3	682	6.0	291	12.1	1 775	1.9	74	24.5	243	21.1
Cass -----	853	2.9	1 349	2.8	556	4.7	7 660	3.0	81	17.2	301	4.8
Cavalier -----	665	2.9	771	3.3	349	9.2	1 701	3.0	36	19.5	132	2.8
Dickey -----	421	7.6	815	4.9	228	10.5	3 007	1.0	49	29.0	217	11.3
Divide -----	392	6.0	330	8.4	129	15.3	306	12.0	49	27.7	213	29.8
Dunn -----	521	5.4	581	7.2	205	11.8	892	11.8	70	26.4	98	22.4
Eddy -----	227	6.8	350	6.6	120	17.6	513	7.9	53	25.7	100	38.3
Emmons -----	614	5.1	919	7.6	276	8.3	842	10.9	32	21.9	89	12.6
Foster -----	254	7.7	407	6.3	110	15.8	988	4.3	34	42.0	116	14.8
Golden Valley -----	175	8.6	258	7.2	53	16.2	478	25.1	56	31.2	105	22.2
Grand Forks -----	654	3.0	1 194	3.3	345	6.1	7 933	.7	69	10.9	541	1.5
Grant -----	528	4.2	640	4.4	177	12.9	809	5.3	54	29.8	95	23.0
Griggs -----	302	5.8	413	6.6	137	11.3	788	7.7	27	29.7	177	33.9
Hettinger -----	336	5.2	478	5.7	143	10.9	875	2.1	50	23.8	150	24.3
Kidder -----	410	5.5	679	7.9	218	12.0	1 175	13.5	63	30.6	173	30.5
LaMoure -----	597	4.2	1 099	4.0	242	9.4	1 564	2.9	58	22.6	176	25.9
Logan -----	397	5.7	591	6.2	185	12.2	567	9.1	35	29.5	42	4.2
McHenry -----	712	4.6	761	5.8	287	10.6	1 692	13.7	48	25.6	144	17.8
McIntosh -----	416	5.1	478	4.4	125	9.4	374	4.0	36	19.5	47	3.7
McKenzie -----	540	6.1	559	7.0	310	9.8	1 585	7.7	72	21.0	253	4.4
McLean -----	775	5.0	850	5.3	372	10.4	1 548	9.6	76	24.6	71	7.4
Mercer -----	377	7.2	356	6.9	152	16.6	490	1.9	59	27.6	143	55.4
Morton -----	790	4.3	1 032	5.1	299	10.2	1 717	4.5	105	20.6	227	12.3
Mountain -----	583	5.1	484	7.0	247	11.0	1 055	9.1	60	25.0	140	16.8
Nelson -----	406	5.4	506	4.7	223	9.3	1 655	9.7	32	19.6	106	3.7
Oliver -----	262	6.0	310	5.4	137	17.4	411	7.7	49	33.0	95	28.0
Pembina -----	544	3.0	1 013	2.6	390	5.4	7 460	1.1	74	10.8	550	3.9
Pierce -----	432	4.3	589	5.0	138	13.4	531	13.2	73	23.0	102	12.2
Ramsey -----	418	4.3	445	3.7	206	7.8	1 367	7.7	36	19.6	137	15.4
Ransom -----	380	6.1	630	2.4	187	11.0	1 952	3.3	60	37.4	123	31.7
Renville -----	339	4.9	286	4.8	121	10.1	496	1.6	31	21.2	117	9.5
Richland -----	769	3.6	1 148	4.1	368	7.7	4 653	1.9	77	21.6	541	11.5
Rolette -----	398	5.4	494	8.8	240	11.5	738	12.6	57	34.6	68	28.6
Sargent -----	371	5.0	571	3.4	214	9.4	1 632	2.9	49	21.6	217	24.7
Sheridan -----	394	4.4	395	6.7	115	16.0	368	12.4	25	36.5	25	29.2
Sioux -----	158	8.8	274	10.9	63	20.2	402	2.6	32	34.0	149	5.0
Slope -----	214	6.5	327	6.6	121	10.7	722	6.4	29	28.0	82	19.4
Stark -----	617	5.5	747	6.0	181	11.9	988	15.9	56	23.5	94	34.6
Steele -----	278	5.9	491	3.1	181	9.0	1 636	1.8	18	1.5	94	.4
Stutsman -----	856	3.7	1 268	3.6	423	8.5	3 183	4.1	83	20.3	275	12.1
Towner -----	376	5.4	492	4.8	192	10.3	1 060	5.4	45	19.9	273	19.6
Traill -----	417	4.7	675	8.9	354	4.7	4 688	2.9	56	16.6	316	8.1
Walsh -----	643	4.7	1 353	2.3	478	6.9	14 065	1.1	96	18.7	596	9.9
Ward -----	867	4.5	853	4.3	299	10.3	1 756	2.9	70	21.1	131	18.8
Wells -----	565	3.5	675	3.9	247	10.2	1 213	4.3	33	2.1	108	.5
Williams -----	635	5.7	593	5.6	253	10.9	1 303	9.6	48	21.2	147	6.6

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

APPENDIX C C-17

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Repair and maintenance				Customwork, machine hire, and rental of machinery and equipment				Interest expense			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
North Dakota	28 340	1.8	191 111	1.2	15 304	2.0	64 170	1.5	20 696	1.8	213 388	1.2
Adams	316	4.1	1 543	5.5	195	8.5	791	15.0	219	8.7	1 950	5.4
Barnes	755	3.1	6 344	1.5	419	5.0	2 573	11.0	618	4.0	7 573	3.5
Benson	580	2.9	4 213	5.2	301	6.7	1 700	13.2	395	7.5	4 108	6.2
Billings	234	4.5	1 036	12.8	112	17.7	184	27.2	139	12.3	1 040	24.5
Bottineau	666	3.3	4 067	3.7	299	8.3	994	6.8	527	5.7	5 034	5.7
Bowman	273	5.6	1 380	5.3	99	14.2	331	7.8	193	9.6	1 637	9.8
Burke	416	3.8	2 353	10.1	179	12.7	465	19.8	273	8.1	1 769	7.2
Burleigh	718	4.5	3 119	7.4	358	10.7	817	16.8	465	8.1	3 757	10.5
Cass	921	2.4	10 021	2.1	586	5.3	2 849	2.7	711	3.8	11 123	2.1
Cavalier	688	2.9	5 136	3.7	468	5.1	3 601	8.2	547	5.8	5 832	4.4
Dickey	471	6.2	3 566	4.1	341	9.2	1 735	7.1	393	8.2	4 380	4.2
Divide	485	3.4	2 267	4.9	215	11.4	500	17.5	338	6.7	2 504	7.6
Dunn	587	4.0	2 920	6.8	293	8.3	546	9.2	433	7.1	3 197	6.8
Eddy	275	4.7	1 759	6.4	148	14.7	343	7.9	204	7.5	1 524	6.6
Emmons	685	4.6	3 458	5.8	367	9.2	1 149	10.7	453	6.8	3 991	10.8
Foster	262	7.5	2 227	6.2	174	13.1	904	3.0	214	11.6	2 461	8.8
Golden Valley	200	4.4	1 017	5.3	95	18.2	376	16.4	138	14.4	1 377	8.9
Grand Forks	691	2.7	8 385	1.7	433	6.1	3 084	4.2	535	5.3	7 564	3.3
Grant	579	3.0	3 040	4.1	233	10.3	732	10.2	454	5.5	3 974	4.5
Griggs	348	3.6	2 119	3.4	222	7.2	1 165	11.5	267	5.8	2 473	5.3
Hettinger	384	4.1	2 655	7.7	210	8.5	859	5.2	312	6.0	2 872	5.5
Kidder	455	4.5	2 425	7.0	238	11.2	585	10.4	314	8.1	3 028	11.8
LaMoure	652	3.2	4 893	3.0	456	5.5	1 576	3.4	488	5.7	3 985	5.6
Logan	456	3.7	2 784	6.0	275	7.8	879	7.0	298	7.9	2 974	7.8
McHenry	810	3.6	3 654	4.2	324	10.5	726	9.4	548	5.3	3 864	5.5
McIntosh	432	4.7	2 636	4.2	251	9.0	640	9.6	355	6.0	3 037	6.2
McKenzie	668	3.6	3 298	4.1	410	8.3	1 758	15.0	422	8.0	4 200	8.0
McLean	818	4.5	4 596	5.6	421	9.9	1 103	13.1	587	6.9	4 880	5.2
Mercer	494	3.7	1 864	6.3	249	10.9	466	12.6	316	8.2	2 009	7.4
Morton	856	3.9	4 436	5.5	416	8.9	1 056	6.7	628	6.2	4 529	4.4
Mountain	686	3.7	2 893	4.3	378	8.0	982	11.3	461	6.7	3 820	7.4
Nelson	448	3.9	3 267	3.3	244	8.0	1 264	13.9	321	7.0	3 302	5.6
Oliver	291	4.6	1 696	9.5	129	19.1	190	13.4	221	11.4	1 384	8.4
Pembina	599	2.3	6 783	2.2	360	6.1	3 010	1.8	472	4.2	8 381	4.1
Pierce	473	3.7	2 856	3.9	221	10.7	437	7.6	341	7.2	2 824	6.9
Ramsey	480	3.3	3 978	4.3	260	7.8	1 431	6.8	311	5.8	3 382	5.6
Ransom	418	5.0	2 944	4.7	223	12.5	1 608	6.0	256	8.1	3 698	6.2
Renville	354	4.4	2 218	2.7	174	9.3	608	7.9	275	7.4	2 623	2.7
Richland	821	3.3	7 671	1.5	442	6.4	1 686	4.3	647	4.9	10 441	2.1
Rolette	460	4.0	2 532	6.4	231	12.0	865	10.8	326	8.8	2 200	8.9
Sargent	412	4.1	3 058	3.7	276	8.1	1 418	5.4	324	6.6	3 682	5.6
Sheridan	373	5.5	2 147	8.8	198	11.2	434	13.3	276	8.4	2 398	10.2
Sioux	189	4.8	1 061	8.8	71	19.5	343	8.6	153	7.8	1 380	10.4
Slope	242	4.6	1 489	8.6	129	9.1	450	8.0	193	7.9	2 256	8.8
Stark	713	4.3	3 440	6.3	290	10.3	621	9.5	564	6.3	3 894	6.2
Steele	313	4.3	3 062	6.1	198	7.7	966	2.6	277	4.9	4 082	5.9
Stutsman	919	3.3	6 876	3.0	567	5.2	3 205	3.7	615	5.4	7 039	4.3
Towner	446	2.3	2 939	7.6	230	10.6	1 250	7.1	321	7.2	3 346	7.6
Traill	458	3.2	4 589	2.5	293	7.3	1 908	9.2	399	5.1	6 850	4.9
Walsh	700	4.1	8 149	2.7	506	5.8	3 576	3.1	558	5.8	8 347	2.7
Ward	1 040	2.7	5 917	3.7	438	7.8	1 529	7.5	696	5.7	6 648	4.8
Wells	573	4.1	4 368	3.9	329	8.5	964	3.5	462	6.4	4 391	5.4
Williams	757	3.3	3 966	5.2	330	9.4	939	16.6	443	8.1	4 372	7.4

Farm production expenses¹—Con.

Geographic area	Farm production expenses ¹ —Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
North Dakota	16 577	1.8	277 212	1.0	26 816	1.8	56 779	1.7	30 160	1.8	235 642	1.1
Adams	169	9.8	1 622	7.6	333	3.1	825	5.2	325	3.4	2 020	8.3
Barnes	479	5.7	8 996	4.1	714	3.2	1 680	3.7	831	1.6	7 782	1.8
Benson	321	7.7	4 523	6.7	537	4.6	1 428	10.0	598	2.8	4 744	4.4
Billings	113	16.3	785	16.1	231	4.5	151	8.0	243	3.0	1 263	16.8
Bottineau	318	7.4	4 156	5.7	702	3.0	1 268	4.7	764	2.1	5 337	4.7
Bowman	148	10.9	769	9.7	281	5.2	486	6.6	336	2.8	1 736	6.1
Burke	205	9.4	1 784	10.6	393	4.9	576	8.0	443	3.2	2 045	9.0
Burleigh	317	11.1	2 030	9.5	751	3.5	1 184	5.6	759	3.5	3 502	6.1
Cass	626	4.4	21 644	2.0	814	3.4	2 710	18.5	986	1.8	12 995	1.7
Cavalier	484	5.7	10 037	3.6	593	3.6	1 723	4.0	736	1.6	7 591	2.5
Dickey	287	9.2	4 633	5.5	487	5.5	1 216	6.2	525	4.3	5 047	9.0
Divide	191	10.8	1 649	14.3	493	3.2	855	6.9	500	2.9	2 343	7.4
Dunn	346	8.1	2 530	6.7	560	4.5	878	5.4	630	3.1	3 349	5.1
Eddy	170	9.7	2 695	7.4	251	6.2	592	14.2	295	3.0	2 402	11.7

See footnotes at end of table.

C-18 APPENDIX C

1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Emmons -----	377	9.0	3 264	7.6	634	5.3	1 126	5.8	713	4.1	3 824	6.3
Foster -----	112	8.8	2 713	5.3	267	5.8	781	8.4	282	5.5	2 510	3.9
Golden Valley -----	116	11.4	1 128	7.0	199	5.9	377	4.6	197	3.5	1 511	9.7
Grand Forks -----	478	6.0	17 601	1.8	621	3.4	1 841	4.3	731	1.5	10 061	1.1
Grant -----	261	8.0	3 262	6.5	546	3.7	1 019	5.4	577	3.1	3 480	5.4
Griggs -----	233	5.4	3 883	7.7	307	6.5	716	5.9	375	1.7	2 963	3.7
Hettinger -----	275	6.8	3 302	6.0	351	5.8	679	6.3	409	3.2	2 931	3.4
Kidder -----	227	9.8	1 953	10.3	459	4.1	918	6.3	490	3.3	3 161	8.7
La Moure -----	348	7.3	5 414	4.8	574	4.7	1 298	5.7	667	2.8	6 299	3.0
Logan -----	311	7.6	2 583	7.8	415	4.5	788	8.2	471	3.0	3 022	6.0
McHenry -----	404	9.0	3 039	9.7	763	4.3	1 303	5.2	838	3.3	4 516	5.5
McIntosh -----	250	8.2	1 792	4.9	435	4.4	653	4.9	467	3.4	2 968	7.0
McKenzie -----	357	7.9	2 854	9.3	652	4.2	850	5.4	703	2.6	5 212	9.0
McLean -----	486	8.4	5 602	8.8	855	4.1	1 215	6.5	907	3.2	5 204	6.5
Mercer -----	302	8.8	2 058	12.4	458	4.8	583	7.5	513	3.2	1 705	5.3
Morton -----	471	8.0	5 034	7.9	854	3.8	1 305	5.9	907	3.0	5 631	4.6
Mountrail -----	389	7.1	3 703	7.9	678	3.7	1 213	6.3	725	3.1	3 670	5.9
Nelson -----	273	6.8	4 444	6.0	423	4.4	1 201	7.9	464	3.2	3 610	4.2
Oliver -----	177	14.3	1 429	13.2	280	5.7	303	9.4	314	3.2	2 278	11.7
Pembina -----	443	4.7	16 727	1.9	508	3.6	1 901	3.5	617	1.7	9 082	2.5
Pierce -----	239	8.2	1 847	7.0	447	3.6	954	3.6	493	3.0	2 815	5.6
Ramsey -----	248	7.3	4 780	4.7	426	4.6	1 158	5.5	500	2.3	3 808	3.0
Ransom -----	275	8.1	4 690	4.8	369	3.2	869	3.7	449	1.4	4 613	2.7
Renville -----	186	10.0	2 327	4.7	339	5.1	628	5.3	396	1.4	2 783	3.3
Richland -----	587	4.4	18 508	2.6	845	3.1	2 500	5.2	931	1.7	8 975	1.2
Rolette -----	249	11.4	1 943	9.0	406	5.2	757	8.8	465	2.8	2 254	4.9
Sargent -----	305	6.9	5 411	4.1	409	4.6	1 090	4.1	480	2.2	4 185	2.9
Sheridan -----	201	10.4	1 565	11.9	370	5.4	682	8.2	400	4.1	2 296	6.4
Sioux -----	127	12.5	936	11.2	179	6.7	330	7.6	200	2.8	1 740	11.5
Slope -----	114	13.1	1 141	14.1	231	5.5	464	8.7	251	3.8	1 585	6.4
Stark -----	408	8.1	3 383	7.6	692	4.4	1 049	5.8	713	3.9	3 673	4.4
Steele -----	194	8.2	5 976	7.2	304	3.7	857	3.6	335	1.4	4 052	2.4
Stutsman -----	509	5.7	10 637	4.4	842	3.8	2 103	4.6	962	2.5	7 614	2.4
Towner -----	276	7.5	4 251	6.0	331	7.5	773	6.7	461	1.8	3 831	3.1
Trailor -----	383	3.8	13 861	3.3	415	4.7	1 314	4.1	504	2.0	6 943	3.0
Walsh -----	543	6.0	20 266	1.7	616	4.0	1 699	4.4	754	1.8	13 731	1.8
Ward -----	527	6.9	6 631	5.5	883	4.0	1 582	3.8	1 095	2.0	5 841	3.1
Wells -----	320	8.2	5 076	6.6	587	3.5	1 253	7.1	608	3.2	4 695	4.7
Williams -----	422	8.1	4 346	6.5	706	4.3	1 076	6.0	825	2.4	4 414	5.5
Geographic area	Net cash return from agricultural sales for the farm unit (see text) ¹				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
North Dakota -----	31 124	1.7	652 308	1.2	28 967	1.7	27 469 875	1.1	27 804	1.7	19 216 531	.9
Adams -----	353	1.8	5 127	7.2	331	2.0	(D)	(D)	308	2.0	194 388	1.2
Barnes -----	840	1.2	25 064	3.1	771	1.3	761 213	.7	754	1.3	662 017	.6
Benson -----	635	1.8	8 269	7.8	604	1.7	632 548	1.0	588	1.7	459 506	.9
Billings -----	243	3.0	1 692	23.2	213	3.0	134 323	2.8	185	3.1	57 872	3.1
Bottineau -----	797	1.4	15 821	5.2	764	1.6	823 847	.8	742	1.6	578 559	.8
Bowman -----	344	1.9	5 012	7.1	297	2.4	(D)	(D)	269	2.5	143 056	1.7
Burke -----	463	2.4	7 932	7.9	451	2.6	444 536	2.0	427	2.6	239 886	1.8
Burleigh -----	795	2.9	5 304	12.7	704	3.0	483 013	2.4	664	3.0	285 854	2.3
Cass -----	1 005	1.2	35 527	3.3	946	1.0	1 019 954	.5	925	1.0	936 292	.5
Cavalier -----	743	1.3	21 421	4.7	709	1.3	801 803	.7	698	1.3	682 481	.7
Dickey -----	552	2.8	13 017	6.8	513	2.9	498 608	1.5	476	2.9	378 520	1.4
Divide -----	527	2.3	9 251	8.6	508	2.2	554 623	1.9	491	2.2	264 308	1.8
Dunn -----	650	2.4	7 892	9.7	575	2.6	436 378	2.2	551	2.6	260 141	2.0
Eddy -----	311	1.2	5 085	13.1	294	1.8	286 846	1.4	277	1.8	188 252	1.3
Emmons -----	759	3.7	11 759	8.4	690	2.2	531 230	1.7	646	2.1	338 540	1.6
Foster -----	297	2.2	7 223	21.3	270	2.0	310 042	1.1	261	2.0	248 128	1.1
Golden Valley -----	218	3.2	4 255	22.6	204	1.6	(D)	(D)	188	1.3	118 690	.6
Grand Forks -----	751	1.2	29 250	2.5	718	1.0	717 505	.5	696	1.1	617 551	.5
Grant -----	598	2.7	8 453	10.7	538	2.7	477 629	1.9	529	2.7	292 739	1.7
Griggs -----	382	1.1	9 228	7.2	353	1.1	330 810	.8	327	1.2	258 986	.7
Hettinger -----	427	2.4	10 793	6.3	401	2.3	569 299	1.6	387	2.3	323 330	1.4
Kidder -----	499	2.9	9 501	13.2	472	2.9	399 143	2.2	452	2.9	238 536	2.2
La Moure -----	678	2.4	21 410	4.1	636	2.3	583 227	1.5	607	2.3	446 200	1.4
Logan -----	472	3.0	10 346	6.0	445	2.8	344 586	2.3	423	2.8	223 101	2.2
McHenry -----	889	2.6	12 579	9.2	806	2.6	690 882	2.1	761	2.7	427 489	1.8
McIntosh -----	483	2.7	9 870	6.2	456	2.3	365 175	1.8	427	2.3	265 410	1.6
McKenzie -----	739	2.0	13 689	6.9	680	2.1	507 063	1.4	647	2.0	283 757	1.4
McLean -----	926	3.0	17 369	7.8	884	2.7	874 045	1.9	853	2.7	539 063	1.6
Mercer -----	528	2.7	5 131	9.3	456	2.6	265 838	2.5	434	2.7	149 564	2.3

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE

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Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Net cash return from agricultural sales for the farm unit (see text) ¹				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Morton -----	923	2.7	15 256	7.6	818	2.7	575 546	2.0	784	2.7	370 969	1.9
Mountrain -----	744	2.7	11 354	6.3	709	2.7	690 625	2.0	679	2.7	366 747	1.8
Nelson -----	483	1.8	12 805	7.4	456	1.8	470 529	1.1	448	1.8	361 224	1.1
Oliver -----	325	2.5	3 870	13.0	300	2.3	187 088	2.0	289	2.3	127 180	1.8
Pembina -----	625	1.2	23 266	2.7	600	1.2	559 306	.5	591	1.2	486 118	.5
Pierce -----	501	2.6	5 212	9.1	476	2.7	466 846	2.0	464	2.7	310 239	1.9
Ramsey -----	512	1.9	14 643	5.5	492	1.5	585 434	.8	485	1.5	451 614	.8
Ransom -----	451	1.4	11 776	6.0	408	2.3	340 082	1.3	383	2.3	278 980	1.1
Renville -----	396	1.4	10 164	5.6	390	1.4	445 807	.9	385	1.5	311 151	.9
Richland -----	955	1.3	28 954	2.3	883	1.3	743 424	.7	860	1.3	660 782	.6
Rolette -----	486	2.5	7 234	7.7	436	2.5	364 343	1.9	428	2.5	251 194	1.7
Sargent -----	481	2.2	11 886	4.7	454	1.5	416 775	.9	435	1.5	346 347	.8
Sheridan -----	419	2.9	4 104	15.1	394	2.9	363 907	2.3	376	3.0	218 227	2.0
Sioux -----	200	2.8	2 389	18.1	176	2.7	134 313	2.1	168	2.8	86 488	1.7
Slope -----	271	1.7	4 238	11.6	248	1.3	282 120	1.2	232	1.4	149 212	1.1
Stark -----	787	2.9	7 285	10.7	703	2.9	544 181	2.3	650	2.9	305 355	2.2
Steele -----	335	1.4	11 054	4.5	326	1.0	405 379	.6	324	1.0	355 660	.5
Stutsman -----	988	2.2	21 924	5.2	900	1.7	996 088	.8	840	1.7	720 857	.7
Towner -----	461	1.8	12 790	5.9	448	1.1	529 868	.7	439	1.1	402 271	.7
Trail-----	517	1.3	17 152	7.0	494	1.2	483 085	.6	490	1.2	444 108	.6
Walsh -----	780	1.5	23 069	3.9	1 746	1.5	681 458	.7	723	1.5	564 709	.6
Ward -----	1 108	1.9	17 216	4.0	1 035	1.9	949 288	1.3	999	1.9	652 316	1.2
Wells -----	639	2.4	13 193	8.7	603	2.2	639 400	1.4	581	2.3	463 453	1.3
Williams -----	833	2.3	14 204	7.0	783	2.5	846 635	1.8	758	2.5	429 114	1.7
Geographic area	Irrigated land				Livestock and poultry							
	Farms		Acres		Cattle and calves inventory				Beef cows inventory			
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
North Dakota -----	816	1.5	187 212	.8	15 183	1.9	1 723 920	1.4	13 216	1.9	837 716	1.5
Adams -----	3	19.1	(D)	(D)	211	1.7	31 564	1.2	192	1.9	16 481	1.3
Barnes -----	10	7.0	1 995	2.5	349	1.5	28 033	1.3	291	1.7	12 129	1.5
Benson -----	9	5.5	1 922	3.7	300	1.8	28 209	1.3	262	1.8	14 585	1.4
Billings -----	3	23.4	50	22.2	194	3.0	27 477	2.4	167	3.2	16 393	2.6
Bottineau -----	2	—	(D)	(D)	267	2.0	17 195	2.2	242	2.1	9 313	2.3
Bowman -----	5	13.9	571	7.9	205	2.7	27 645	1.8	189	2.7	15 618	1.7
Burke -----	1	47.9	(D)	(D)	160	3.4	11 412	3.5	153	3.4	7 173	3.4
Burleigh -----	36	5.3	4 310	5.1	454	3.2	56 237	2.2	401	3.3	28 439	2.5
Cass -----	24	3.8	10 238	.7	191	2.0	20 822	1.1	145	2.4	6 358	1.7
Cavalier -----	1	39.1	(D)	(D)	136	2.5	6 696	2.7	131	2.5	3 897	2.9
Dickey -----	47	3.6	15 903	2.5	313	3.1	46 072	2.1	282	3.2	20 323	2.3
Divide -----	11	8.3	2 220	6.6	227	2.6	15 795	2.4	221	2.6	9 033	2.5
Dunn -----	5	9.7	280	10.4	530	2.6	84 499	1.9	495	2.6	43 140	2.0
Eddy -----	7	8.4	1 791	5.8	184	2.3	21 100	2.1	169	2.4	11 735	2.1
Emmons -----	12	7.5	3 602	5.5	515	2.3	63 598	1.7	393	2.4	25 041	2.1
Foster -----	8	7.2	3 399	1.8	118	3.1	16 453	2.8	113	3.1	7 017	3.4
Golden Valley -----	9	6.0	2 326	.7	130	1.4	21 484	1.1	119	1.4	12 393	1.2
Grand Forks -----	37	2.2	10 377	1.0	159	2.1	14 897	1.2	129	2.4	3 692	2.1
Grant -----	22	7.0	2 723	6.5	471	2.6	66 573	2.0	418	2.7	34 438	2.0
Griggs -----	13	4.5	2 752	2.4	182	1.7	15 998	1.9	163	1.9	7 912	1.9
Hettinger -----	7	14.1	589	19.3	255	2.8	24 836	2.2	215	2.9	11 708	2.6
Kidder -----	21	6.0	6 565	2.8	376	2.9	61 669	2.3	347	2.9	32 597	2.4
La Moure -----	22	4.5	6 158	3.9	354	2.6	35 721	2.0	270	2.8	12 729	2.5
Logan -----	6	8.2	1 550	.6	365	2.8	57 371	2.2	295	3.1	24 021	2.6
McHenry -----	24	7.4	6 698	4.8	553	2.7	60 421	2.2	496	2.8	33 034	2.2
McIntosh -----	2	24.1	(D)	(D)	331	2.5	44 186	1.8	274	2.6	17 288	2.2
McKenzie -----	99	2.6	23 434	1.7	444	2.1	69 911	1.6	422	2.2	42 435	1.7
McLean -----	31	4.7	4 588	1.8	468	2.9	42 417	2.2	415	2.9	19 083	2.5
Mercer -----	14	7.6	2 304	8.4	335	2.8	38 804	2.0	300	2.9	20 790	2.1
Morton -----	42	5.6	4 744	3.6	695	2.7	95 475	2.0	571	2.8	43 115	2.2
Mountrain -----	3	23.0	220	35.7	353	3.0	28 842	2.6	326	3.1	17 892	2.6
Nelson -----	3	19.7	(D)	(D)	180	2.0	13 206	2.0	159	2.1	6 525	2.6
Oliver -----	18	5.1	4 207	14.5	245	2.7	29 638	2.2	214	3.0	14 836	2.6
Pembina -----	2	15.7	(D)	(D)	128	2.5	10 579	2.2	117	2.6	(D)	
Pierce -----	5	14.1	495	17.3	242	3.0	24 544	2.6	205	3.2	11 069	3.1
Ramsey -----	3	13.7	(D)	(D)	105	2.5	8 042	2.1	88	2.8	3 809	2.7
Ransom -----	46	3.3	17 495	1.6	245	1.9	31 219	1.8	212	2.1	14 324	2.0
Renville -----	—	—	—	—	119	2.2	6 807	2.4	102	2.4	3 580	2.2
Richland -----	10	5.5	2 127	.1	334	1.8	32 072	1.4	252	1.9	12 133	1.7
Rolette -----	1	—	(D)	(D)	286	2.7	27 839	2.5	252	2.7	14 195	2.6
Sargent -----	26	2.3	8 483	1.2	221	1.8	26 087	1.4	182	2.0	10 248	1.7
Sheridan -----	—	—	—	—	244	3.2	24 365	3.2	214	3.3	12 897	3.2
Sioux -----	2	—	(D)	(D)	157	2.9	32 372	1.6	152	2.9	20 324	1.6
Slope -----	9	9.4	358	7.9	179	1.8	27 787	1.4	172	1.8	16 293	1.5

See footnotes at end of table.

C-20 APPENDIX C

1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Irrigated land				Livestock and poultry							
	Farms		Acres		Cattle and calves inventory				Beef cows inventory			
					Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Stark -----	9	10.8	843	16.3	568	2.8	60 165	2.3	441	3.0	25 016	2.8
Steele -----	9	5.4	3 276	1.0	84	2.3	5 614	2.3	72	2.4	2 496	2.4
Stutsman -----	25	4.3	5 210	2.1	533	1.8	71 124	1.5	442	1.9	31 892	1.8
Towner -----	3	20.2	(D)	(D)	116	2.2	5 628	1.9	109	2.2	(D)	(D)
Traill -----	6	8.2	411	.1	61	3.0	4 772	2.0	46	3.6	(D)	(D)
Walsh -----	13	4.8	2 391	1.1	225	2.3	13 099	2.8	212	2.4	6 941	2.8
Ward -----	28	5.8	1 331	20.8	466	1.9	33 771	1.6	421	2.0	16 532	1.7
Wells -----	3	—	(D)	(D)	285	2.8	27 664	2.2	234	2.9	10 956	2.8
Williams -----	59	4.0	15 070	2.5	335	2.7	26 114	2.3	312	2.8	14 969	2.4
Livestock and poultry —Con.												
Geographic area	Milk cows inventory				Hogs and pigs inventory				Sheep and lambs inventory			
	Farms		Total		Farms		Total		Farms		Total	
					Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
North Dakota -	1 925	2.0	74 885	1.5	1 932	1.8	346 082	1.2	1 623	1.9	217 240	1.7
Adams -----	12	7.7	361	5.4	22	5.8	2 420	5.8	41	4.4	12 252	2.5
Barnes -----	43	3.9	1 763	3.3	80	3.0	14 784	2.3	40	5.0	6 100	7.6
Benson -----	23	5.8	814	5.0	25	5.0	3 649	3.2	35	4.8	3 595	3.1
Billings -----	29	6.6	467	8.0	22	8.0	2 445	10.6	10	11.1	834	16.8
Bottineau -----	22	6.0	457	8.4	25	6.0	2 463	5.8	54	4.0	2 113	5.6
Bowman -----	17	7.5	227	7.0	32	6.1	5 387	3.5	79	4.0	26 926	2.8
Burke -----	7	17.1	210	18.7	24	6.7	1 385	7.3	23	8.3	3 184	11.4
Burleigh -----	35	5.7	1 133	6.5	46	5.7	5 598	11.6	53	5.6	4 321	9.7
Cass -----	11	6.6	672	2.6	106	2.8	32 963	2.0	43	4.2	7 604	2.0
Cavalier -----	5	16.6	103	13.4	26	6.1	4 071	8.7	9	10.2	1 301	19.3
Dickey -----	26	4.7	1 473	2.4	58	4.1	20 899	2.1	59	5.1	8 991	4.6
Divide -----	5	15.7	91	28.9	37	6.1	4 403	7.2	18	7.5	6 375	2.4
Dunn -----	60	4.8	1 445	5.6	39	6.1	4 790	6.5	36	5.9	3 657	6.8
Eddy -----	25	5.9	678	6.2	8	10.6	431	12.8	15	7.2	3 616	5.4
Emmons -----	170	2.9	8 052	2.3	56	4.4	3 591	5.9	21	6.9	1 227	9.1
Foster -----	5	19.6	218	14.0	18	7.6	5 433	6.5	32	5.0	3 855	1.9
Golden Valley -----	21	3.3	739	2.0	20	4.7	2 447	5.5	18	4.6	3 135	4.7
Grand Forks -----	15	6.2	507	10.5	30	5.2	8 184	6.8	13	7.7	2 232	3.2
Grant -----	109	3.9	3 580	3.4	82	4.2	12 922	4.2	45	5.7	7 476	8.3
Griggs -----	17	6.8	634	9.2	19	7.0	2 472	5.8	24	6.1	1 356	8.5
Hettinger -----	46	5.4	1 722	4.8	40	5.5	12 328	3.5	28	7.3	3 678	9.1
Kidder -----	49	4.1	1 963	3.2	35	6.5	3 260	6.3	41	5.7	8 737	6.8
La Moure -----	72	3.9	3 470	3.0	42	5.1	10 124	2.1	52	5.2	3 891	7.6
Logan -----	79	4.0	3 534	3.1	15	8.7	1 544	6.8	9	13.8	803	21.7
McHenry -----	53	5.7	1 459	6.9	36	6.5	3 176	7.5	52	5.6	5 274	5.7
McIntosh -----	63	3.8	2 643	2.3	24	6.8	2 490	8.9	29	7.3	1 951	7.3
McKenzie -----	20	6.7	280	1.5	26	6.0	4 851	8.8	27	5.9	9 289	4.4
McLean -----	49	5.2	1 854	4.1	43	5.1	4 210	5.0	30	6.1	2 338	10.1
Mercer -----	47	6.2	967	7.9	22	7.6	1 540	5.4	19	8.3	1 100	15.2
Morton -----	137	3.3	7 424	2.5	100	4.2	12 539	5.0	41	6.4	5 189	6.1
Mountain -----	26	8.0	679	8.9	22	8.6	767	13.7	33	6.2	5 175	6.4
Nelson -----	18	5.2	866	4.1	12	7.9	1 848	9.3	29	4.9	3 729	2.5
Oliver -----	41	4.4	1 844	3.6	24	5.8	3 247	6.9	31	5.3	3 688	7.1
Pembina -----	2	15.7	(D)	(D)	26	5.6	10 917	4.4	5	13.1	(D)	(D)
Pierce -----	35	6.2	1 197	6.1	20	8.6	1 195	17.4	17	9.2	1 165	13.4
Ramsey -----	6	11.2	407	2.6	19	7.0	1 876	8.8	10	9.9	1 150	9.7
Ransom -----	15	5.8	782	2.6	63	3.4	25 432	1.9	33	5.9	1 569	7.0
Renville -----	10	7.5	312	7.3	9	7.5	417	5.7	19	7.6	2 070	12.8
Richland -----	41	4.8	1 790	4.0	142	2.6	36 210	2.6	27	5.8	3 404	11.7
Rolette -----	33	5.4	1 113	4.7	15	8.5	841	27.5	16	7.9	1 242	9.7
Sargent -----	21	4.8	1 279	4.3	73	3.4	19 042	1.9	29	6.2	1 472	7.7
Sheridan -----	47	5.6	1 406	7.0	16	8.8	467	13.6	7	14.7	205	19.9
Sioux -----	20	6.2	765	5.1	11	10.2	1 517	15.5	8	10.9	2 904	2.4
Slope -----	14	7.8	145	17.0	19	5.9	2 048	6.4	31	5.0	3 539	9.3
Stark -----	118	3.8	4 787	3.2	76	4.3	9 874	4.6	55	5.3	4 509	7.2
Steele -----	6	9.4	316	6.8	9	6.8	1 881	4.0	13	6.0	1 569	3.7
Stutsman -----	83	3.0	4 032	2.4	41	4.4	9 369	2.0	64	3.8	10 164	2.5
Towner -----	2	22.8	(D)	(D)	19	7.0	2 784	9.6	18	6.1	1 910	11.9
Traill -----	1	—	(D)	(D)	18	5.9	6 067	6.2	9	9.3	(D)	(D)
Walsh -----	3	16.7	135	15.3	23	6.0	4 941	3.1	25	6.7	1 777	9.5
Ward -----	54	4.0	2 055	2.4	48	4.1	2 736	3.9	67	3.8	4 709	4.8
Wells -----	42	5.2	1 597	5.5	35	6.0	4 262	7.3	37	5.9	3 571	5.2
Williams -----	15	8.6	197	10.5	34	6.8	1 545	7.7	44	5.8	4 518	5.2

See footnotes at end of table.

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Livestock and poultry —Con.							
	Hens and pullets of laying age inventory				Broilers and other meat-type chickens sold			
	Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
North Dakota	828	2.4	246 952	.5	160	3.1	38 573	3.1
Adams	9	9.0	311	10.2	1	40.5	(D)	(D)
Barnes	19	6.1	(D)	(D)	6	12.0	342	16.8
Benson	8	12.1	313	17.0	2	24.8	(D)	(D)
Billings	18	9.3	505	11.9	—	—	—	—
Bottineau	18	6.8	443	8.9	2	18.6	(D)	(D)
Bowman	11	10.0	186	11.2	—	—	—	—
Burke	10	10.9	293	18.9	2	22.6	(D)	(D)
Burleigh	36	6.5	1 342	15.7	2	29.9	(D)	(D)
Cass	14	7.6	(D)	(D)	3	22.9	575	22.8
Cavalier	14	8.4	(D)	(D)	7	14.0	691	16.1
Dickey	12	12.0	1 519	36.4	4	17.8	752	12.6
Divide	8	14.0	285	16.8	2	22.6	(D)	(D)
Dunn	41	6.0	965	9.7	2	23.4	(D)	(D)
Eddy	8	9.9	186	6.5	2	26.0	(D)	(D)
Emmons	13	8.6	788	13.2	1	—	(D)	(D)
Foster	6	12.7	150	9.8	—	—	—	—
Golden Valley	3	15.7	103	16.1	1	27.5	(D)	(D)
Grand Forks	13	7.3	(D)	(D)	3	21.1	100	29.1
Grant	42	6.7	1 721	11.1	6	18.9	585	27.5
Griggs	8	11.4	216	10.9	2	24.5	(D)	(D)
Hettinger	21	8.2	781	10.3	1	—	(D)	(D)
Kidder	7	14.2	367	15.5	—	—	—	—
LaMoure	13	10.0	(D)	(D)	2	—	(D)	(D)
Logan	19	8.5	562	8.3	2	16.5	(D)	(D)
McHenry	30	6.7	976	8.6	9	10.8	707	15.1
McIntosh	14	11.2	487	17.8	5	13.7	365	13.6
McKenzie	28	6.5	1 140	12.4	2	27.2	(D)	(D)
McLean	16	9.5	795	14.6	7	13.5	1 010	15.1
Mercer	27	7.4	1 000	8.4	10	11.5	1 240	13.5
Morton	47	5.6	2 168	12.7	14	11.3	1 332	16.3
Mountain	16	7.7	875	14.3	4	17.5	395	25.8
Nelson	5	14.0	420	27.2	—	—	—	—
Oliver	12	8.3	324	8.1	4	10.4	400	10.4
Pembina	9	10.7	666	5.4	2	15.7	(D)	(D)
Pierce	8	15.4	405	17.4	3	16.6	818	22.2
Ramsey	10	8.5	179	9.9	1	38.2	(D)	(D)
Ransom	12	7.9	738	10.0	—	—	—	—
Renville	7	11.4	264	18.9	—	—	—	—
Richland	17	8.2	780	12.1	8	12.8	6 810	13.9
Rolette	15	9.2	556	12.4	—	—	—	—
Sargent	11	9.7	174	13.2	6	14.6	728	15.7
Sheridan	8	14.1	153	14.5	—	—	—	—
Sioux	11	7.9	373	7.9	—	—	—	—
Slope	8	9.3	132	10.8	—	—	—	—
Stark	52	5.7	1 913	6.1	6	17.4	380	19.7
Steele	3	13.3	254	4.7	2	14.0	(D)	(D)
Stutsman	17	6.6	560	11.5	2	19.8	(D)	(D)
Towner	5	11.7	80	13.6	1	32.3	(D)	(D)
Traill	3	14.4	49	13.7	4	10.8	289	8.9
Walsh	7	8.7	126	14.3	7	10.8	1 020	7.7
Ward	19	7.8	717	9.2	8	8.8	2 422	3.9
Wells	16	9.6	8 057	6.1	2	—	(D)	(D)
Williams	24	8.3	911	11.4	—	—	—	—
Selected crops harvested								
Geographic area	Corn for grain or seed				Corn for silage or green chop			
	Farms		Acres		Quantity		Farms	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
North Dakota	3 353	1.0	595 347	.6	37 487 419	.6	3 443	1.6
Adams	12	4.8	574	2.9	21 260	3.0	47	3.3
Barnes	146	1.7	11 184	1.3	552 852	1.4	96	2.5
Benson	30	3.1	3 141	3.9	171 566	2.6	71	2.3
Billings	4	12.4	124	4.0	5 468	2.4	13	8.6
Bottineau	14	2.4	1 145	1.5	63 520	1.3	24	4.5
Bowman	4	—	673	—	21 850	—	19	6.4
Burke	5	13.6	248	10.6	10 396	15.5	2	34.0
Burleigh	46	4.9	4 089	3.5	208 320	3.0	91	3.6
Cass	346	1.2	82 088	.7	5 161 517	.7	62	2.9
Cavalier	3	13.0	117	24.4	4 355	29.5	6	13.9
Dickey	245	2.5	62 498	1.5	3 732 867	1.3	99	3.6
Divide	6	14.9	447	33.2	14 726	27.1	2	—
Dunn	17	5.8	870	7.1	37 224	8.4	143	3.3
Eddy	19	5.0	2 739	2.8	148 460	2.6	80	2.7
							6 976	2.3
							43 717	3.4

See footnotes at end of table.

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1992 CENSUS OF AGRICULTURE

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested											
	Corn for grain or seed							Corn for silage or green chop				
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, green	Relative standard error of estimate (percent)
Emmons -----	93	2.5	7 968	3.6	344 331	2.9	201	2.3	18 949	2.1	116 628	2.2
Foster -----	46	1.8	6 342	.6	213 340	.6	55	4.0	4 660	5.7	23 848	6.1
Golden Valley -----	5	5.5	381	17.3	11 637	17.0	16	4.4	2 173	1.6	26 211	.7
Grand Forks -----	114	1.7	15 240	1.0	834 646	1.1	48	3.4	2 217	3.8	15 125	4.1
Grant -----	56	3.1	4 923	2.9	245 126	3.2	168	2.7	16 132	2.2	78 725	2.0
Griggs -----	23	2.4	2 327	2.3	120 390	2.2	42	3.8	2 601	3.0	22 325	5.5
Hettinger -----	10	6.9	861	3.0	39 530	2.6	44	3.8	3 029	3.3	13 634	4.8
Kidder -----	27	5.0	3 987	3.1	197 726	4.6	108	3.5	10 537	2.4	60 341	2.6
La Moure -----	230	2.2	30 376	1.6	1 731 235	1.7	99	3.4	6 194	2.4	40 673	2.6
Logan -----	15	6.7	1 534	3.0	83 623	2.7	112	3.5	9 509	2.7	49 858	2.7
McHenry -----	42	4.1	4 846	2.6	204 554	2.9	86	3.8	7 342	2.4	59 157	1.6
McIntosh -----	18	5.4	1 025	6.1	55 887	4.7	87	2.6	8 431	1.6	49 387	1.2
McKenzie -----	20	4.6	1 095	3.2	98 834	3.9	39	3.3	2 797	3.0	27 039	3.2
McLean -----	37	3.1	3 255	2.1	157 798	1.5	74	4.1	5 354	3.4	33 414	3.3
Mercer -----	14	7.0	819	4.9	45 974	8.6	81	4.6	6 064	4.2	38 853	5.9
Morton -----	73	2.4	8 093	.8	433 659	.8	262	2.6	22 064	2.0	147 719	2.1
Mountrain -----	4	12.3	362	3.5	10 727	2.3	12	9.4	792	9.5	3 560	9.2
Nelson -----	16	4.9	1 102	3.6	62 240	4.1	41	3.3	1 949	2.2	11 969	2.5
Oliver -----	18	5.6	1 848	4.0	95 456	3.6	81	2.8	7 501	2.0	48 848	1.9
Pembina -----	46	2.0	4 661	1.3	235 845	1.7	25	4.3	1 460	5.8	16 656	7.9
Pierce -----	27	5.0	1 828	5.7	74 957	6.8	59	3.8	3 856	2.8	21 177	3.9
Ramsey -----	8	4.8	953	4.6	50 985	5.2	19	4.9	1 351	2.7	7 257	2.2
Ransom -----	206	2.2	54 850	1.2	3 729 952	1.1	77	2.6	6 067	1.9	44 479	2.4
Renville -----	2	—	(D)	(D)	(D)	(D)	10	4.8	599	4.5	3 770	7.2
Richland -----	559	1.3	154 685	.7	11 627 434	.7	114	2.7	5 937	2.4	40 988	2.6
Rolette -----	9	5.2	431	6.3	21 030	6.5	19	4.5	1 225	2.4	7 740	3.1
Sargent -----	253	1.7	56 553	.9	3 651 471	1.0	55	2.8	3 935	2.0	27 743	1.9
Sheridan -----	24	3.6	1 559	2.4	80 911	1.9	44	4.5	2 998	3.9	16 356	3.3
Sioux -----	7	—	1 028	—	71 987	—	35	5.1	3 062	3.3	15 433	4.2
Slope -----	1	39.5	(D)	(D)	(D)	(D)	15	6.2	1 443	3.9	6 180	3.6
Stark -----	27	4.7	1 450	5.7	70 306	5.0	116	3.5	11 206	2.7	59 823	2.7
Steele -----	58	1.9	8 883	1.2	488 566	1.0	22	4.1	710	3.7	6 389	6.3
Stutsman -----	104	1.7	11 166	1.0	479 489	1.3	164	1.7	14 885	1.5	83 888	1.6
Towner -----	5	6.5	520	2.8	28 725	2.3	13	6.0	452	3.4	3 867	3.3
Trailing -----	116	1.9	17 294	1.4	1 094 155	1.4	12	5.6	546	2.8	3 918	3.9
Walsh -----	44	2.8	4 602	2.0	293 262	1.8	55	3.9	2 581	4.0	17 298	4.8
Ward -----	29	3.1	2 206	1.4	118 256	.9	48	2.4	3 133	1.1	19 548	1.1
Wells -----	65	2.4	5 869	1.5	207 862	1.5	112	3.4	8 791	2.5	45 224	2.7
Williams -----	5	9.8	236	16.6	14 070	4.1	18	4.8	1 483	1.4	17 878	1.0
Selected crops harvested —Con.												
Geographic area	Wheat for grain							Barley for grain				
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
	North Dakota -	22 918	1.7	10 627 608	.9	409 882 271	.8	13 979	1.4	2 388 696	.7	142 747 145
Adams -----	248	2.1	110 072	1.4	3 329 066	1.5	118	2.1	14 467	1.5	598 412	1.3
Barnes -----	673	1.3	361 022	.7	16 129 139	.7	523	1.3	120 022	.7	8 467 054	.7
Benson -----	523	1.7	285 575	.9	9 253 323	.9	383	1.7	72 959	.9	3 535 494	.9
Billing-----	102	4.2	23 863	4.1	530 581	4.0	37	6.0	2 764	3.0	108 935	1.9
Bottineau -----	639	1.5	376 517	.8	13 083 670	.8	487	1.4	124 744	.7	6 024 854	.6
Bowman -----	193	2.8	83 601	2.0	2 313 132	1.9	101	3.2	12 820	1.8	455 821	1.8
Burke -----	385	2.7	173 731	1.8	6 336 654	1.8	194	2.8	27 986	1.7	1 452 887	1.6
Burleigh -----	405	3.3	138 758	2.5	4 054 770	2.5	163	4.0	14 702	2.7	682 891	2.7
Cass -----	826	1.0	410 602	.5	19 853 537	.5	540	1.1	110 384	.7	8 150 557	.7
Cavalier -----	675	1.3	468 298	.7	21 714 592	.8	591	1.3	166 621	.7	11 425 836	.7
Dickey -----	370	2.9	154 149	1.5	6 331 136	1.4	187	3.0	25 321	2.0	1 576 900	1.8
Divide -----	451	2.3	207 070	1.9	7 871 741	1.9	202	2.7	20 388	2.2	1 086 271	2.3
Dunn -----	376	2.9	109 586	2.2	3 002 108	2.1	198	2.8	19 635	1.8	821 790	1.6
Eddy -----	222	1.8	93 491	1.3	2 822 280	1.4	122	2.1	13 536	1.5	658 388	1.6
Emmons -----	525	2.3	184 289	1.6	5 456 235	1.6	220	2.3	23 290	1.8	1 119 321	1.6
Foster -----	241	2.1	146 410	1.1	5 226 193	1.1	121	2.5	16 450	1.8	972 873	1.8
Golden Valley -----	151	1.5	78 100	.7	2 717 773	.8	94	1.6	12 583	1.1	601 935	1.2
Grand Forks -----	611	1.0	278 837	.5	14 693 420	.5	485	1.1	107 979	.6	8 167 996	.6
Grant -----	383	2.8	126 819	1.7	3 815 314	1.7	238	2.7	26 874	1.8	1 184 170	1.8
Griggs -----	292	1.2	134 806	.8	5 668 961	.8	219	1.5	55 451	.8	3 692 740	.8
Hettinger -----	341	2.4	237 250	1.3	8 159 158	1.3	174	2.7	23 053	1.8	1 005 650	1.8
Kidder -----	311	3.0	75 935	2.5	2 369 281	2.3	140	3.4	13 438	2.8	580 858	2.8
La Moure -----	541	2.4	223 601	1.5	9 841 499	1.4	288	2.4	38 510	1.6	2 602 533	1.6
Logan -----	342	2.9	108 465	2.2	3 552 353	2.1	215	3.2	21 554	2.6	1 044 412	2.4
McHenry -----	550	2.7	190 295	2.0	5 597 737	1.9	313	2.7	44 478	1.8	2 168 175	1.8
McIntosh -----	369	2.4	145 981	1.7	4 537 571	1.7	207	2.5	21 014	2.0	1 075 685	2.1
McKenzie -----	484	2.0	172 209	1.4	6 672 488	1.4	205	2.1	18 831	1.6	898 775	1.6
McLean -----	737	2.7	362 971	1.6	12 527 581	1.6	333	2.6	49 508	1.4	2 618 564	1.3
Mercer -----	313	3.0	74 862	2.6	2 398 921	2.6	109	3.6	8 179	2.9	395 381	2.5

See footnotes at end of table.

1992 CENSUS OF AGRICULTURE**APPENDIX C C-23**

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested —Con.											
	Wheat for grain								Barley for grain			
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)
Morton -----	551	2.8	162 087	2.1	5 387 400	2.0	369	2.9	39 168	1.8	1 969 752	1.9
Mounttrail -----	582	2.7	274 565	1.8	9 968 718	1.8	241	3.0	26 599	2.3	1 386 435	2.3
Nelson -----	404	1.9	218 394	1.0	9 372 427	1.0	321	1.8	64 882	1.2	4 124 892	1.2
Oliver -----	197	2.6	50 314	2.0	1 774 761	1.9	136	2.3	13 775	1.9	758 288	1.7
Pembina -----	523	1.1	286 767	.6	15 671 501	.5	363	1.3	59 461	.7	4 584 226	.6
Pierce -----	393	2.8	166 154	2.0	4 764 592	2.0	297	2.8	48 956	1.8	2 133 926	1.8
Ramsey -----	438	1.5	289 148	.8	11 670 187	.7	392	1.5	94 087	.9	5 876 826	.9
Ransom -----	278	2.4	104 951	1.3	4 704 667	1.2	156	2.2	25 923	1.3	1 787 140	1.2
Renville -----	365	1.5	205 643	.9	8 114 995	.9	299	1.4	72 696	.9	4 105 301	.9
Richland -----	644	1.2	199 732	.7	9 603 319	.6	205	2.0	21 415	1.6	1 474 759	1.5
Rolette -----	298	2.4	139 074	1.5	5 052 510	1.4	227	2.1	50 199	1.3	2 859 678	1.2
Sargent -----	367	1.6	146 405	.9	6 062 752	.9	195	2.0	25 424	1.3	1 556 226	1.3
Sheridan -----	312	3.1	119 670	2.0	3 187 100	2.0	170	3.1	27 614	2.2	1 090 742	1.9
Sioux -----	92	3.6	28 771	2.9	624 838	2.9	35	5.1	3 407	4.1	140 518	4.0
Slope -----	188	1.7	102 358	1.2	2 972 439	1.1	102	2.3	12 089	1.7	501 498	1.5
Stark -----	466	3.2	156 840	2.2	4 352 047	2.2	237	3.0	24 950	2.1	933 997	2.3
Steele -----	312	1.0	182 556	.6	8 004 635	.6	264	1.0	71 760	.6	4 834 352	.7
Stutsman -----	679	1.6	412 426	.7	16 026 065	.6	423	1.3	69 134	.7	4 299 133	.7
Towner -----	407	1.2	270 900	.8	10 663 328	.7	364	1.2	88 503	.7	5 352 859	.7
Traill -----	459	1.1	193 705	.6	9 062 647	.6	378	1.1	83 738	.7	6 223 758	.7
Walsh -----	624	1.3	312 742	.7	16 283 920	.6	441	1.3	66 715	.8	4 879 592	.8
Ward -----	858	2.0	440 273	1.2	15 768 090	1.2	533	1.8	87 902	1.0	4 663 907	1.0
Wells -----	523	2.3	277 013	1.3	9 206 965	1.3	339	2.2	55 633	1.4	2 885 441	1.3
Williams -----	679	2.6	349 955	1.7	11 722 154	1.7	285	2.8	27 125	1.6	1 148 741	1.7
Geographic area	Selected crops harvested —Con.											
	Oats for grain								Sunflower seed			
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Pounds	Relative standard error of estimate (percent)
North Dakota -	7 843	2.0	557 388	1.6	33 414 633	1.5	5 287	1.1	1 130 593	.6	1 260 442 267	.6
Adams -----	103	2.7	8 174	1.9	453 854	2.0	2	—	(D)	(D)	(D)	(D)
Barnes -----	129	2.4	6 766	3.0	568 887	2.8	460	1.3	108 335	.7	142 980 512	.6
Benson -----	132	2.2	10 135	2.8	449 393	1.7	213	1.6	43 325	.9	33 493 467	1.3
Billings -----	82	4.4	4 570	3.9	212 860	4.1	2	24.1	(D)	(D)	(D)	(D)
Bottineau -----	145	2.4	9 684	2.6	581 117	2.4	103	1.9	20 780	1.3	15 459 312	1.4
Bowman -----	90	3.5	7 370	3.7	297 930	3.1	1	—	(D)	(D)	(D)	(D)
Burke -----	127	3.7	8 451	3.9	523 105	3.9	36	3.3	8 881	1.1	7 354 126	1.1
Burleigh -----	257	3.5	21 869	2.8	1 239 819	3.0	15	4.8	3 013	4.0	2 709 132	5.0
Cass -----	71	3.1	3 774	4.1	243 741	2.8	295	1.3	57 704	.9	93 171 392	.8
Cavalier -----	83	3.2	6 588	3.2	549 148	3.1	80	2.3	15 353	1.4	13 937 635	1.2
Dickey -----	150	3.6	11 388	2.5	811 072	2.6	149	2.5	43 404	1.1	57 760 519	1.2
Divide -----	105	3.6	4 520	4.0	292 941	4.2	30	5.3	3 226	6.1	2 264 663	6.8
Dunn -----	258	3.0	18 497	2.9	941 234	3.2	4	—	807	—	458 888	—
Eddy -----	95	2.6	6 801	2.6	378 290	2.9	121	2.1	26 637	1.5	21 687 248	1.6
Emmons -----	367	2.2	34 390	2.3	1 941 083	2.0	19	2.5	2 081	1.5	1 905 449	1.5
Foster -----	72	4.0	5 761	3.9	338 677	3.5	169	2.0	54 328	1.0	51 334 783	1.1
Golden Valley -----	70	1.7	5 725	1.3	364 576	1.5	—	—	—	—	—	—
Grand Forks -----	57	3.6	2 855	5.3	206 487	5.2	205	1.5	29 552	1.0	36 877 194	1.2
Grant -----	289	2.9	22 309	2.3	1 372 570	2.3	13	6.5	2 893	2.4	5 612 663	1.1
Griggs -----	66	3.0	3 906	2.1	291 071	2.2	159	1.6	30 132	1.0	36 225 178	.9
Hettinger -----	124	3.2	11 501	2.3	827 092	2.1	8	10.7	1 349	8.0	1 692 060	4.9
Kidder -----	196	3.4	16 614	2.6	920 191	2.6	12	4.2	2 167	4.0	1 906 000	6.0
LaMoure -----	156	3.2	11 216	2.7	846 685	2.5	354	2.3	82 224	1.3	106 141 665	1.3
Logan -----	191	3.5	10 893	3.2	700 636	3.4	25	6.0	4 400	3.3	4 408 869	2.7
McHenry -----	286	3.1	23 009	3.0	1 052 833	3.1	157	2.8	29 684	1.9	26 099 880	1.8
McIntosh -----	252	2.6	21 591	2.2	1 438 816	2.0	41	3.6	9 116	2.3	8 674 000	2.3
McKenzie -----	181	2.5	9 447	2.1	556 603	2.0	3	—	880	—	430 000	—
McLean -----	349	2.9	28 395	2.5	1 586 257	2.9	51	2.9	8 736	1.1	9 603 098	1.1
Mercer -----	214	3.4	14 918	3.1	823 879	3.4	2	—	(D)	(D)	(D)	(D)
Morton -----	415	2.9	31 828	2.3	2 046 526	2.4	22	4.0	5 334	.8	5 668 177	.7
Mounttrail -----	161	3.6	8 906	3.3	561 504	3.0	36	3.9	9 032	2.7	8 057 502	2.5
Nelson -----	80	2.8	4 007	3.2	264 621	3.1	254	2.0	48 831	1.3	45 543 914	1.5
Oliver -----	171	2.5	11 714	2.4	834 411	2.4	8	9.5	1 608	3.8	1 641 500	3.2
Pembina -----	41	4.1	1 427	4.5	103 112	4.7	49	1.9	6 795	.8	8 331 452	.8
Pierce -----	141	3.9	9 094	4.1	403 751	4.0	139	2.8	28 944	1.5	25 009 935	1.5
Ramsey -----	37	3.8	1 946	2.7	131 289	3.0	186	1.8	40 219	1.1	31 048 151	1.2
Ransom -----	100	2.7	6 006	2.9	420 349	2.7	157	2.2	32 899	1.2	50 323 398	1.1
Renville -----	98	2.3	8 008	2.7	473 555	2.6	30	3.3	5 956	1.1	5 855 320	1.2
Richland -----	88	3.1	3 917	3.6	265 137	3.7	191	1.7	30 476	1.3	48 567 381	1.4
Rolette -----	91	3.5	4 648	3.6	305 821	4.0	46	3.4	7 711	2.4	5 456 628	2.6
Sargent -----	61	3.1	3 540	2.7	274 912	2.4	156	2.3	26 223	1.6	34 799 078	1.4
Sheridan -----	148	3.9	9 508	4.4	515 181	3.9	77	3.0	15 560	1.8	8 184 865	1.6
Sioux -----	74	3.6	6 937	2.2	415 831	2.1	—	—	—	—	—	—
Slope -----	65	2.9	5 131	3.3	245 459	4.3	2	—	(D)	(D)	(D)	(D)

See footnotes at end of table.

C-24 APPENDIX C**1992 CENSUS OF AGRICULTURE**

Table F. Reliability Estimates for the State and County Totals: 1992 —Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested —Con.										
	Oats for grain							Sunflower seed			
	Farms		Acres		Quantity		Farms		Acres		Quantity
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Pounds
Stark -----	309	3.4	22 143	2.7	1 182 832	2.6	6	—	1 202	—	857 113
Steele -----	17	4.6	905	6.9	77 740	7.2	139	1.4	25 633	.8	36 525 967
Stutsman -----	229	2.1	15 107	2.1	1 051 498	2.2	353	1.1	113 501	.5	121 731 760
Towner -----	51	3.0	2 230	2.8	133 656	2.6	106	2.1	18 325	1.6	14 231 612
Traill -----	20	4.9	915	7.1	59 248	5.8	68	2.9	8 259	2.7	13 456 626
Walsh -----	94	3.4	3 831	3.7	245 438	4.5	122	2.5	13 911	2.0	13 722 853
Ward -----	337	2.2	24 829	2.2	1 540 186	2.1	128	2.1	31 605	1.1	33 415 374
Wells -----	134	3.3	10 758	2.5	544 601	2.7	282	2.2	66 081	1.4	63 702 991
Williams -----	184	3.2	8 936	2.9	507 128	3.1	1	49.0	(D)	(D)	(D)
Selected crops harvested —Con.											
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)											
Geographic area	Farms			Acres			Quantity			Relative standard error of estimate (percent)	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry		
North Dakota -	15 695	1.9	2 467 853	1.7			3 267 324			1.6	
Adams -----	229	1.9	56 118	1.6			69 818			1.5	
Barnes -----	371	1.5	31 608	1.4			52 727			1.6	
Benson -----	351	1.8	51 433	1.5			62 483			1.4	
Billings-----	161	3.3	26 733	3.2			23 022			3.2	
Bottineau -----	324	1.9	38 856	2.4			40 239			2.4	
Bowman -----	202	2.8	40 377	2.4			43 004			2.7	
Burke -----	208	3.2	23 834	3.7			30 083			3.8	
Burleigh-----	489	3.1	97 014	2.8			119 216			2.8	
Cass -----	208	1.8	14 022	1.6			33 160			1.9	
Cavalier-----	134	2.6	8 526	2.7			15 810			2.5	
Dickey -----	302	3.2	46 357	2.7			85 885			2.4	
Divide -----	285	2.6	32 341	2.4			41 361			2.9	
Dunn -----	494	2.7	107 681	2.3			107 185			2.3	
Eddy -----	203	2.1	39 996	1.9			48 240			2.3	
Emmons -----	449	2.1	77 608	2.0			107 445			1.9	
Foster -----	131	2.8	14 735	3.7			22 999			4.6	
Golden Valley -----	131	1.3	22 468	.9			26 992			1.2	
Grand Forks-----	182	1.9	14 648	2.0			21 188			2.3	
Grant -----	432	2.8	96 540	2.2			142 410			2.4	
Griggs -----	186	1.8	21 704	2.0			31 901			2.3	
Hettinger -----	277	2.7	47 072	2.4			63 329			2.4	
Kidder -----	376	3.0	126 905	2.5			158 279			2.4	
LaMoure -----	367	2.6	39 532	2.5			82 296			2.4	
Logan -----	338	3.0	77 518	2.7			116 772			2.9	
McHenry -----	545	2.8	133 371	2.3			132 889			2.4	
McIntosh-----	332	2.5	63 067	2.1			92 719			2.1	
McKenzie -----	472	2.1	74 818	1.8			91 634			1.6	
McLean -----	553	2.9	67 952	2.8			84 767			2.8	
Mercer -----	319	2.9	47 449	2.3			60 605			2.3	
Morton -----	654	2.8	119 397	2.3			183 279			2.2	
Mountrain -----	409	3.0	55 551	2.6			58 556			2.6	
Nelson -----	208	2.0	21 192	2.5			32 722			2.4	
Oliver -----	248	2.7	43 422	2.2			68 774			2.2	
Pembina -----	133	2.4	9 076	2.4			18 118			1.9	
Pierce -----	282	3.0	53 980	2.9			49 955			2.7	
Ramsey -----	161	2.2	14 709	3.4			23 866			3.0	
Ransom -----	245	2.2	25 338	2.4			50 203			2.5	
Renville -----	112	2.6	11 919	3.3			11 775			3.2	
Richland -----	318	1.8	24 533	2.1			50 831			2.1	
Rolette -----	306	2.7	47 592	3.3			66 413			3.1	
Sargent -----	202	1.8	21 605	1.9			40 106			2.1	
Sheridan -----	261	3.4	48 046	3.1			52 919			3.4	
Sioux -----	139	3.1	47 557	1.8			59 744			1.8	
Slope -----	179	1.7	31 016	1.5			27 664			1.5	
Stark -----	539	3.0	96 132	2.8			114 279			2.9	
Steele -----	83	2.1	5 838	2.3			12 176			2.6	
Stutsman -----	530	1.6	85 677	1.7			118 570			1.6	
Towner -----	137	1.9	10 938	1.7			16 736			2.1	
Traill -----	66	2.9	4 380	4.6			9 472			2.0	
Walsh -----	257	2.1	19 411	2.4			31 517			2.6	
Ward -----	511	1.9	59 362	1.8			66 352			2.0	
Wells -----	291	2.8	35 333	2.8			42 469			2.7	
Williams -----	373	2.7	35 566	2.8			52 370			2.4	

¹Data are based on a sample of farms.

**Table G. State Estimates of the Not on the Mail List Component of Farm Coverage Error:
1992**

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text]

Item	Census published farms		Not on mail list ¹		Percent not on mail list ¹	
	Total (number)	Relative standard error of estimate (percent)	Total (number)	Relative standard error of estimate (percent)	Total (percent)	Standard error of percent
Farms ----- number	31 123	1.7	379	43.4	1.2	.5
Land in farms ----- acres	39 438 144	1.1	347 769	62.2	.9	.5
Average size of farm ----- acres	1 267.2	2.0	917.6	45.8	(X)	(X)
Farms by size:						
Less than 10 acres -----	785	2.2	—	(X)	—	(X)
10 to 49 acres -----	1 264	2.0	85	(H)	6.3	5.9
Less than 50 acres -----	2 049	1.9	85	(H)	4.0	3.8
50 acres or more -----	29 074	1.7	294	47.8	1.0	.5
50 to 99 acres -----	938	2.1	87	99.8	8.5	7.8
100 to 179 acres -----	2 007	2.2	—	(X)	(X)	—
180 acres or more -----	26 129	1.8	207	54.1	.8	.4
Harvested cropland ----- farms	27 804	1.7	111	51.7	.4	.2
acres	19 216 531	.9	66 273	59.0	.3	.2
Farms by value of sales:						
Less than \$1,000 -----	1 269	2.1	—	(X)	—	(X)
\$1,000 to \$2,499 -----	870	2.1	85	(H)	8.9	8.1
Less than \$2,500 -----	2 139	1.9	85	(H)	3.8	3.7
\$2,500 or more -----	28 984	1.7	294	47.8	1.0	.5
\$2,500 to \$9,999 -----	3 554	2.1	87	99.8	2.4	2.3
\$10,000 or more -----	25 430	1.7	207	54.1	.8	.4
Market value of agricultural products sold --- \$1,000 --	2 745 752	.8	8 118	44.6	.3	.2
Farms by standard industrial classification:						
Crops (01) -----	19 905	1.6	77	59.5	.4	.2
Livestock (02) -----	11 218	2.0	302	52.6	2.6	1.3
Farms by type of organization:						
Individual or family -----	27 093	1.8	379	43.4	1.4	.6
Partnership or corporation -----	3 853	1.5	—	(X)	—	(X)
Other -----	177	3.0	—	(X)	—	(X)
Farms by tenure of operator:						
Full owners -----	9 898	2.1	315	50.1	3.1	1.5
Part owners and tenants -----	21 225	1.6	64	71.2	.3	.2
Part owners -----	16 058	1.5	64	71.2	.4	.3
Tenants -----	5 167	2.0	—	(X)	—	(X)
Operators by place of residence:						
On farm operated -----	21 830	1.7	157	67.1	.7	.5
Not on farm operated -----	6 812	2.0	34	(H)	.5	.5
Not reported -----	2 481	1.5	188	65.0	7.0	4.3
Operators by principal occupation:						
Farming -----	25 189	1.7	157	67.1	.6	.4
Other -----	5 934	2.0	34	(H)	.6	.6
Operators by sex:						
Male -----	30 184	1.7	379	43.4	1.2	.5
Female -----	939	2.1	—	(X)	—	(X)
Operators by race:						
White -----	30 993	1.7	95	58.2	.3	.2
Black and other races -----	130	3.2	96	100.0	42.4	24.5
Operators by years on present farm:						
4 years or less -----	2 560	2.4	65	71.2	2.5	1.7
5 years or more -----	23 656	1.7	126	79.8	.5	.4
Average years on present farm -----	22.5	2.5	7.8	19.0	(X)	(X)
Not reported -----	4 907	1.6	188	65.0	3.7	2.3
Average age of operator -----	50.0	2.4	36.4	9.6	(X)	(X)

Note: These estimates do not account for incorrectly classified farms or farms appearing more than once in the census and are subject to change in the 1992 Coverage Evaluation publication. See appendix C text for further explanation.

¹Estimates are based on a sample survey conducted independently of census data collection.